

GRAIN & FEED JOURNALS CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter



750,000 bus. Reinforced Concrete Elevator of Consolidated Flour Mills Co., Wichita, Kan.
(For description see page 78)

Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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Grain & Feed Journals Consolidated, a merger of Grain Dealers Journal (Est. 1898), American Elevator & Grain Trade (Est. 1882), Grain World (Est. 1928), and Price-Current-Grain Reporter (Est. 1844). Published on the 2nd and 4th Wednesday of each month in the interest of progressive wholesalers in grain, feed and field seed. 332 South La Salle Street, Chicago, Illinois, U. S. A. Price \$2.00 per year, 25c per copy. Entered as second class matter November 27, 1930, at the Post Office at Chicago, Ill., under the act of March 3, 1879. Vol. LXXXVI. No. 2, January 22, 1941.

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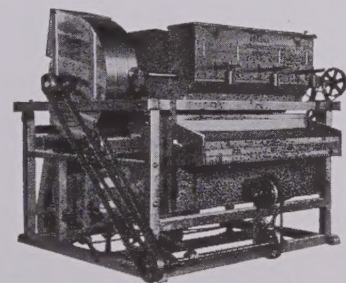
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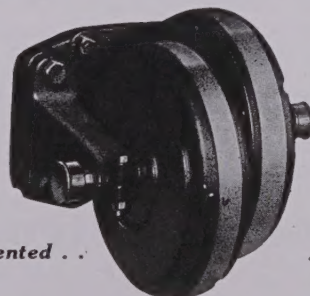


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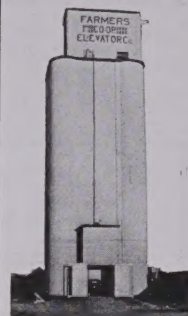
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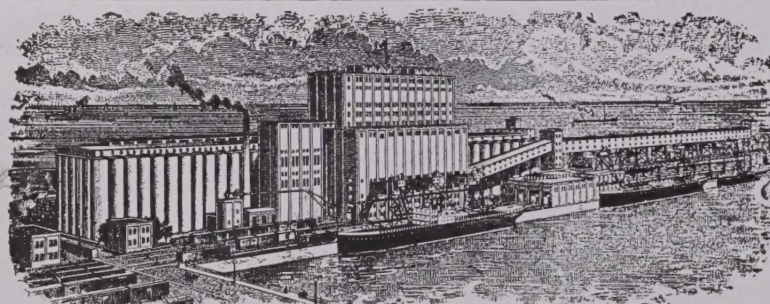
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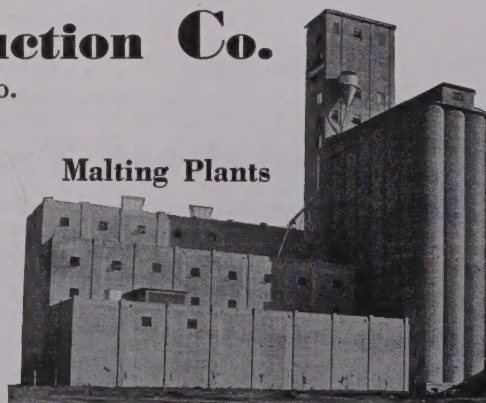
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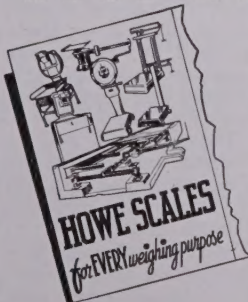
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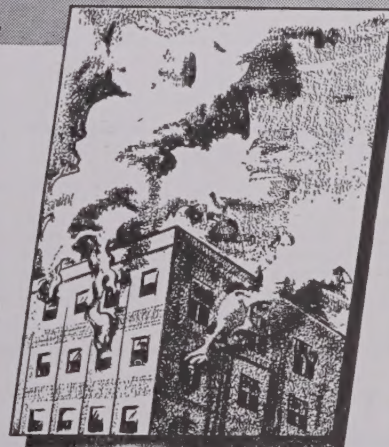
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RICHARDSON Scales, Feed Mixer, Sheller, Elevator. W. W. Pearson, Reynolds, Ind.

CORN CUTTER & Grader—has motor—used very little. 84G5, Grain & Feed Jnls., Chicago.

FEED MIXER—one ton—floor level feed—has motor—good as new. Write 84G7, Grain & Feed Journals, Chicago, Ill.

HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 84G8, Grain & Feed Journals, Chicago, Ill.

FEED MIXER for sale, has motor, and a late machine. Need space. Will sacrifice. Write 84G6, Grain & Feed Journals, Chicago, Ill.

GRAIN elevator machinery, 15 ton American Scale, 25 h.p. Foos Engine, Corn Sheller and Fairbanks-Morse Feed Grinder. Write K. & M. Anderson, Box 206, Chillicothe, Ohio.

FOR SALE—Direct connected traction type reconditioned electric freight elevator, 2,000 lb. capacity, push button control. W. J. Meschberger Elev. & Repair Co., Inc., Lima Road, Ft. Wayne, Ind.

WE HAVE A. C. motors $\frac{1}{4}$ h.p. to 60 h.p., shafting, hangers, pulleys, belting, bucket elevators, screw conveyors, elevator legs, heads and boots; galvanized iron bins and hoppers, reels, scalpels, aspirators, roller mills, grinders 20 ton Columbia Scale; 12' Howe batch mixer and other machinery. At sacrifice prices. Mill Equipment Co., 319 W. Chicago Ave., Chicago, Ill.

**MOTORS—GENERATORS
ELECTRICAL MACHINERY**

Large stock of motors and generators, A.C. and D.C., new and rebuilt, at attractive prices. Special bargains in hammermill motors, 25 to 100 H.P., 1200 to 3600 R.P.M. Write for stock list and prices. Expert repair service. V. M. NUSSBAUM & CO., Fort Wayne, Indiana.

MILLS—MOTORS—ENGINES

30" Sprout Waldron double motor driven attrition mill \$300.00; 24" Bauer belted type \$75.00; Monitor corn cracker \$35.00; 30 h.p. Waukesha 4 cyl. gasoline engine \$175.00; 90 h.p. Venn Severin 3 cyl. oil engine \$375.00. Hundreds of REBUILT—GUARANTEED electric motors, all makes, types and sizes at money saving prices. Write us on your requirements. Rockford Electric Equipment Co., 728 South Wyman St., Rockford, Illinois.

MOTOR-PUMPS: Guaranteed rebuilt electric motors, pumps, etc. Largest stock in Illinois, outside of Chicago. Will take your equipment in trade; also offer emergency motor repair and rewinding service. Distributors for Wagner and Peerless motors, specially adapted for farm and grain elevator application. We offer free engineering advice on your problems. Write us without obligation. New illustrated bulletin No. 23, just off the press, will be mailed on request. Rockford Power Machinery Co., 6th Ave. and 6th St., Rockford, Ill.

**Daily
MARKET RECORD**

A boon to the grain dealer who keeps a convenient, permanent record of daily market quotations for ready reference.

This book provides space for recording hourly Board of Trade radio or CND quotations for Wheat, Corn, Oats, Rye, and Barley. Spaces for a week's markets on a sheet; sixty sheets, size $9\frac{1}{2}$ x $11\frac{1}{2}$ inches, in a book. Well bound in tough pressboard. Shipping weight one pound. Order Form CND 97-5, Price \$1, plus postage.

**Grain & Feed Journals
Consolidated**

332 S. La Salle St. Chicago, Ill.

MACHINES WANTED

WANTED—1 3 h.p. Single Phase, Electric Motor, must be dust proof type. Gluek Co-op. Elev. Ass'n, Gluek, Minn.

THE WANTED-FOR SALE DEPARTMENT of GRAIN & FEED JOURNALS is a market place where buyer and seller, employer and employee, and those offering investments can meet to their mutual advantage and profit and it will pay every subscriber to give these columns a close study twice each month, because of the constantly changing variety of opportunities seeking your consideration.

SAMPLE ENVELOPES

SAMPLE ENVELOPES—SPEAR SAFETY—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size $4\frac{1}{2}$ x 7 inches, \$2.35 per hundred, or 500, \$10.00 plus postage. Sample mailed on request. Grain & Feed Journals, 332 S. La Salle St., Chicago, Ill.

STOP! READ! THINK! One advertiser writes, "Your service brought me 24 replies." We can do the same for you. Don't wait, write now.

Leaking Car Report Blanks

bear a reproduction of a box car and a form showing all points at which a car might leak, thus facilitating reporting specific places where car showed leaks at destination. One of these blanks should be sent with papers for each car with the request that it be properly filled out and returned in case of any signs of leakage. Printed on Goldenrod bond, size $5\frac{1}{2}$ x $8\frac{1}{2}$ inches, and put up in pads of 50 blanks. Order Form 5. Weight, 3 ounces. Price, 40c a pad; four for \$1.00. Prices f. o. b. Chicago.

GRAIN & FEED JOURNALS

Consolidated

332 S. La Salle St., Chicago, Ill.

**The Last Word in Clark's Direct
Reduction Grain Tables**

is a combination of our popular 7-card set, Form 3275 Spiral and our new Truck Loads to Bushels, Form 23,090 Spiral which reduce by 10 pound breaks any weight of grain from 600 to 23,090 pounds to bushels of 32, 48, 56, 60, 70 and 75 lbs.

Carefully printed from large clear type, using jet black ink, showing the bushels directly beside the weight of grain reduced and distinctly separated by rules and spaces so as to prevent errors in reading. The most practical, the most helpful grain reduction tables ever published. Their use will return their cost every day of the busy season in labor and time saved and errors prevented.

The spiral binding keeps the cards flat, and in regular sequence, and prevents the exposure of more than one grain at a time so it is easy to keep wide open the tables for the grain being received.

Both sets of tables are printed on heavy six ply tough check of durable quality, 11x13 inches with marginal index. Shipping weight, 3 lbs. You can get both sets described below for \$2.60, plus postage.

Direct Reduction Grain Tables

Copyright by GRAIN BUYERS JOURNAL, CHICAGO

32 lbs. per bushel—OATS

Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.	Red.	Wt.
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Calling all States to speed Defense

—with everything from planes to potatoes

IT'S only natural that the need for building airplanes for defense should be in the spotlight just now.

That need is new and dramatic, and—as perhaps few people know—it's a job in which every state in the union plays a part.

In the list of materials needed is everything from abrasives, acids, aluminum and antimony to tin, tungsten, turpentine, wool and zinc.

According to one well-informed writer, "55 per cent of the average requirements for aircraft fabrication is shipped in excess of 1,500 miles for assembly"—which means *the American railroads will do the major transportation job.*

They will do the job for the aviation industry just as they do for all the industries of America—and beyond that, they'll do the job for

America's 6,800,000 farms.

Now the fact is, the job the railroads do in serving farms is far bigger and more exacting than the one that's done for the airplane industry—as shown by the figures for one simple crop, potatoes.

In the year 1939, for example, 3,193,373 tons of potatoes moved to market by rail.

The big fact is—the American railroads handle not only the needs of defense but the needs of everyday life—the food we eat, the clothes we wear, the fuel that warms us, and all the things we use every day—and do it with such smoothness that folks seldom give it a thought.

Isn't that the best evidence that the railroads are America's No. 1 transportation system in *competence* as well as size?

NOW—TRAVEL ON CREDIT

America's railroads offer new, simple installment payment plan for trips and tours.
You can take your car along too.

SEE YOUR LOCAL TICKET AGENT



ASSOCIATION OF AMERICAN RAILROADS WASHINGTON D. C.

Indiana Plans Big Convention

Plans have been completed for a fast-moving program, filled with a wide variety of subjects, for the 40th annual convention of the Indiana Grain Dealers Ass'n, which will be held at the Columbia Club, Indianapolis, Ind., Monday and Tuesday, Jan. 27 and 28, announces Sec'y Fred K. Sale. The program is crowded and officials urge all delegates to get to the three business sessions on time so that the subjects scheduled can be completed.

The convention will open with registration on the 10th floor of the Columbia Club at 8:30 a. m. Monday. Theater tickets will be presented for the ladies. Prize attendance tickets will accompany banquet tickets.

THE FIRST convention session opens at 9:45 a. m. with singing under the direction of "Uncle" Ernie Smith, Toledo. K. J. Maltas, director of feed nutrition for the A. E. Staley Mfg. Co. will speak on "The Future of Soybean Products"; and Harold Stein, of the hearings branch of the Wage-Hour Division, Washington, D. C., will cover "Wage-Hour Problems of Grain and Feed Dealers." Also at this session the ass'n officers will present their reports.

SPEAKERS at the second session, opening at 1:30 p. m. Monday, will be Clarence A. Jackson, executive vice president of the Indiana State Chamber of Commerce, Indianapolis, on "S Curve Ahead"; Ray B. Bowden, executive vice president of the Grain & Feed Dealers National Ass'n, St. Louis, Mo., on "National Legislation Affecting the Grain Trade"; and R. D. MacDaniel, of the Grain Dealers National Mutual Fire Insurance Co., Indianapolis, on "Elevator Fires During 1941." The remainder of this session will be devoted to "Feed Information, Please," with C. W. Sievert, Chicago, as the master of ceremonies, and one of the board of judges including Dr. J. Holmes Martin, of the poultry husbandry department, and Prof. C. M. Vestal, of the animal husbandry department, of Purdue University. The experts, whom the delegates will attempt to "stump" with their questions, will be Frank J. Holt, Valparaiso; Lyman Peck, Fort Wayne; Russell P. Bailey, Nappanee; Walter B. Krueck, Chicago, and Joe E. Nelson, Chicago.

TUESDAY'S morning session, in addition to convention business like reports of the resolutions com'te and election of officers, will have an address from W. L. Snodgrass, district supervisor of the Bureau of Motor Carriers, Indianapolis, covering "New I. C. C. Regulations on Private Trucks"; and A. G. Bryant, Chicago, on "What Price Defense!" Discussions will be opened at this session on a "Proposed Itinerant Merchant Bill for Indiana" and "H. B. No. 14, Gross Income Tax Changes."

ENTERTAINMENT is plentiful and will follow the traditional high-class formula that has been set up by the Indianapolis receivers. The annual banquet will be held Monday evening, in the ball room of the Columbia Club.

Guest speaker is Col. W. S. Drysdale, commanding officer at Fort Benjamin Harrison, on "National Defense and its Relation to Civilian Activities."

Sixty minutes of entertainment are provided in the "I.G.D.A. Gala Review of 1941," a series of vaudeville singing and dancing acts obtained by the entertainment com'te of the Indianapolis Board of Trade, and will be followed by dancing to Art Berry's Orchestra until delegates are ready to "call it an evening."

GRAIN & FEED JOURNALS

CONSOLIDATED
INCORPORATED

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Charles S. Clark, Manager

A merger of
GRAIN DEALERS JOURNAL
Established 1898

**AMERICAN ELEVATOR &
GRAIN TRADE**
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT - GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

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THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., JANUARY 22, 1941

CHARGING 6% interest on accounts past due 60 days or more and refusing to settle for less helps to reduce the volume of Accounts Receivable. Try it.

ONE MAN was killed and another badly injured by being caught between a truck and driveway wall. Accidents of this character should warn all elevator operators to stay out of the driveway when dumping heavily laden trucks.

ONLY EIGHT burglaries are reported in this number and none of the midnight prowlers got enough to compensate for jeopardizing their liberty. When elevator operators refrain from keeping cash in the isolated office fewer thieves will visit the plant in their absence.

CONDESCENDINGLY the Wage and Hour Division in paragraph 16 of its revision issued last month states that payments by order of court are not prohibited employers making payment by deduction from wages of employees. It is refreshing to have the would-be dictators admit that the courts are still functioning in this land of the free.

FIRES reported in this number total seventeen, of which eleven occurred in grain elevators and resulted in the destruction of eight. The installation of effective fire fighting apparatus and the correction of known fire hazards is slowly but surely reducing fire losses and the cost of fire insurance.

COUNTRY elevator men grinding and mixing feed are coming to a realization of a power economy that can generally be depended upon to reduce their yearly loss in the feed grinding department. Our news columns during the last year reported that 40 elevator operators installed Diesel engine power and thereby effected a material reduction in their cost of power.

LEGISLATIVE committees of the state grain dealers associations have a splendid opportunity to function this year of grace, 1941, since 44 states will hold biennial sessions of their legislatures. With attention of lawmakers directed to problems of defense they will be more likely to heed the requests of interested grain dealer groups for legislation in the field of domestic trade.

ONE feed manufacturer putting out milk pellets that develop lactic acid of great benefit in the animal in destroying putrefactive bacteria has displeased the Federal Trade Commission with the legitimate puffery needed to interest stock feeders in this product. Trade in any article will suffer if the interest of the buyer can not be stimulated enough to persuade him to give it a trial.

WHITE CORN has long commanded such an attractive premium over yellow corn, elevator operators of the corn belt would be justified in encouraging farmers to select seed of a pure variety and test every lot for germination. Recent premiums in the Chicago market have ranged from 4½ to 6½ cts. per bushel which should be enough to insure a marked increase in the 1941 acreage.

THE marketing allowance instead of acreage control as recommended by a leading Canadian grain firm has very much to commend it. The farmer himself could use his own judgment as to the acreage and if he so desired could grow more and store it on the farm, to be sold later when permitted. If the growing conditions were unfavorable the farmer would not run the risk of not having enough to sell.

THE OPEN DUST HOUSE has long been recognized as an extra fire hazard not only because it readily catches flying sparks and firebrands, but its inflammability tempts pyromaniacs to start a fire as investigation of the recent fire at Percival, Iowa, has disclosed. Some screenings and grain dust can be mixed into feed without reducing the value of the feed and it helps to remove a known fire hazard.

ONE DEFENDANT now asserts that the Federal Trade Commission is seeking to intrench a brokers' bloc in a monopoly, while to one on the side lines it appears that the Commission sees in the Robinson-Patman Act a means to prevent the payment of unearned discounts in the guise of brokerages.

THE GRAIN DUST explosion record for 1940 should encourage operators of grain elevators and feed mills to increase their vigilant control of dust and dirt in hope of protecting their property and persons from dust explosions. Our news columns told of only eleven explosions throughout the entire calendar year of 1940 and we feel certain that the greater vigilance now common with operators of these plants will effect a further reduction in the destructive explosions.

FLOUR MANUFACTURERS seem willing to admit that practices common to the production of white flour have robbed the modern staff of life of its palatability, so a scheme has now been devised whereby all of the vitamins removed from ground wheat during the introduction of the roller system of making flour will be returned and henceforth the millers will mix in all the chemicals necessary to supply the vitamins which are now said to have been removed. It may be that the return to the old stone mill process might satisfy the vitamin chasers' hunger for a more palatable loaf.

TRYING TO SELL wheat as rye placed two Richardson county (Nebr.) thieves under suspicion and they finally confessed to stealing the grain and other property from nearby farms. Paying for stolen grain does not give the grain buyer clear title to the property. Buying grain from strangers is hazardous and calls for careful investigation of the seller as well as the origin of the rye. Many country buyers make it a regular practice to bid low for the grain of strangers and discount all deliveries of uncertain origin. Township maps showing the occupant of each farm in nearby territory helps buyers to identify the seller of each load offered and avoid purchase of stolen grain.

LONG before the original grain futures act was passed Washington officials seemed to encourage attacks by agitators on the boards of trade; but now that the Commodity Exchange Commission has taken future trading under its own wing, and under the guidance of a large salaried personnel, we find the Sec'y of Agriculture discovering what grain dealers have known all along that the futures markets are indispensable as hedging insurance that reduces the cost of distribution. In his annual report, of which an excerpt is published elsewhere the Secretary says that "Narrow operating margins cannot be maintained unless dealers and merchants can be protected against even moderate price fluctuations."

WHILE GRAIN elevators are not congested with moving machinery they are the scene of many regrettable accidents, that with reasonable precaution could have been prevented. Many limbs and some lives are sacrificed each year to unguarded machinery, but only 16 of the 50 accidents charged to grain elevators and feed mills in our news columns during 1940 proved fatal. However, grain elevator owners are recognizing their responsibility and safeguarding known hazards.

THE PARALYZING hand of government control is seen in the sale outside of the Stock Exchange, and over the counter, of large blocks of stock, to avoid the Securities and Exchange Commission's regulations, thereby destroying the open market. At the same time government control of grain speculation thru the Commodity Exchange Commission is now at its maximum just as the open interest and volume of trade in futures on the Chicago Board of Trade is at its minimum.

THE NOVEMBER bulletin of the U.S. Department of Agriculture advertises among a score of other publications "Women's Dresses and Slips," A Buying Guide" indicating how far afield from its legitimate sphere of crop production the Department is wandering. Or, perhaps its Bureau of Home Economics should be transferred to the U. S. Department of Labor, so that the 75 per cent of our non-agricultural population could enjoy the blessings of information for the housewife.

A MISSOURI grain firm operating a sheller and a cob burner has produced such a flood of sparks and dust that the occupant of a nearby dwelling has brought suit for \$5,000 damages. Of course, the plaintiff has not yet collected, but the suit will probably be compromised by an essential reduction in the clouds of dust and smoke produced by the shelling operations. Suits of this character seldom result in the assessment of burdensome damage, but they provide just one more worry for the elevator operator which should have been prevented by a correction of the chronic practices of the offending sheller and cob burner.

IN THE PIONEER days of grain elevator construction, the employment of inexperienced designers or barn builders resulted in many disastrous failures and grain handling plants that were inconveniently arranged, wastefully constructed and operated only at excessive cost. Bursting grain bins are generally due to improper construction or uneven overloading. Our news columns last year told of only 20 elevators bursting, so it is presumed that the engineers employed were more competent and more painstaking. Builders of new elevators cannot overlook the fact that the first cost is not the last. Repairs, remodeling and rebuilding are most expensive.

Admits Failure of Farm Program

At last, the U. S. Dept. of Agriculture in its annual report frankly admits that the "Commodity loan plan is unsatisfactory and a certificate plan is favored that would permit primary markets to dispose of export surpluses."

All men long experienced in the marketing of grain have condemned the artificial boosting of prices for grain and cotton through the means of government loans. All Europe is suffering from the lack of food and would gladly take our present surplus products if shipments could get through the blockade.

When peace is declared and shipments to Europe can be safely made, we will no longer have any real or fictitious excuse for reducing or regulating grain production and while the farm program was designed primarily to diminish production, the piling up of surpluses through the medium of government loans has served to stimulate an increased production to the disadvantage of producers. The so-called farm program has proved a dismal failure and the sooner it is abandoned the more will producers be helped.

Planned Economy Destructive of Free Enterprise

The regimentation of agriculture in the United States during the past several years has been carried out so incompletely as not to afford a basis for sound judgment as to its consequences.

We have to go to Russia to study the effects of a planned economy. In Finland where free enterprise ruled, the standard of living was high. In the part that the Soviet took over the blight of planned economy has already been exposed in a greatly reduced standard of living. The land and the people were the same, the only change being in the political control of the activities of the citizens.

The destructive effects of a planning economy which has been attempted in part in the United States since 1935 has prevented private enterprise from increasing employment in the manner in which employment increased after every preceding depression. For every 1,000 employees in 1929 there were only 912 in 1939, for every \$1,000 earned by the worker in 1929 there was only \$886 earned in 1939. In these ten years business paid out in wages to workers \$24,000,000,000 more than it took in, impoverishing itself and reducing its ability to employ.

The uniform agreement under which grain elevators store grain for the government agency substitutes the judgment of the planners for that of the elevator operator, as to what is a fair charge for services performed. The operator whose volume of business is too small to make ends meet at the agreed rates loses money. His individual purchasing power

is reduced, just as is that of every other private entrepreneur touched by the paralyzing hand of planned economy, the sum total of these reductions destroying the buying power of the public and piling up surpluses of commodities that otherwise would go into consumption.

Reducing the Number of Varieties

Country grain buyers will welcome with open arms any effort made to reduce the number of varieties grown of each kind of grain that they handle and the sooner the farmers respond to the persistent demand for the discontinued planting of mongrel types, the sooner will they realize a higher average price for the grain marketed. The shipper cannot obtain as high a price for carloads of mixed varieties as he can for carloads of a pure preferred variety.

The Crop Improvement Associations have through their test plots convinced farmers of the great folly of persisting in growing varieties of grain not wanted by processors. Convincing results from the extensive planting of hybrid seed corn adapted to different soils and climates has done much to induce growers to give more serious consideration to the selection of the better yielding and the more desirable varieties of seed.

More progress has been made in the intelligent selection of seed during the last five years than in the previous thirty years. The farmers seem to be in a mood to accept the recommendations of the agricultural experiment stations and country grain buyers can champion the cause of better seed to the advantage of everyone concerned. A larger yield of the few varieties sown in his section will reduce discounts and help all shippers to more profitable returns. The more active country shippers are in inducing farmers to plant fewer yet better varieties of any grain will enable him to pay the farmer a higher price because he can ship pure varieties and suffer fewer discounts.

EASTERN dairymen are heavy buyers of feed from grain dealers and feed mixers who would be pleased to see their farmer patrons obtain a profitable adjustment of their difficulty with the federal government that would improve their buying power. In the opinion of the Sec'y of Agriculture the medicine in the form of amended regulations may have been good for the dairymen; but they do not like the taste of it, the New York Dairymen's League having obtained an order of court restraining the Sec'y of Agriculture from holding the referendum necessary to make the A.A.A. order effective Feb. 28. The amendments were rejected by the producers in September, but still the bureaucracy insisted on forcing them upon the farmers.

Standards for Oats and Rye Amended

Amendments to the Official Grain Standards for oats and rye have been announced by the U. S. Department of Agriculture. The amendments established a grade "Special Red Oats," a special grade for plump rye, and place a limitation on the quantity of thin rye in the higher numerical grades.

These changes in the official standards, expected to reflect market values more accurately, will become effective July 1, 1941.

The marked increase in the production of Columbia oats led to the amendment to the oats standards, grain marketing officials pointed out. Columbia Red Oats, classified under the present standards as Red Oats, have been found equal in processing value to White Oats, though in certain markets they have been selling at a price discount under White Oats.

The amendment established a new grade—Special Red Oats—applicable to Columbia Red Oats and to other Red Oats having similar characteristics. The amendment is expected to facilitate the merchandizing of such oats at their proper market value.

The amendments to the rye standards provide a special grade for Plump Rye and place a limitation on the quantity of thin rye permitted in the grades Nos. 1, 2, and 3. "Plump" Rye is defined in the amendment as rye which contains not more than 5 per cent of thin kernels. In grades Nos. 1 and 2, the thin-rye content is limited to 20 per cent and in grade No. 3 the thin rye content is limited to 30 per cent. It is believed that these amendments will more accurately describe the quality of rye marketed.

Poor Grading of New Corn

So much of the 1940 corn crop contains excessive moisture comparatively few applications are being made for loans on farm stored corn and country elevator operators having no driers are testing corn tendered for storage most carefully. Then too corn producers do not look with favor on the conditions of the new storage contract so new corn is beginning to move into commerce in greater volume and the driers are unusually busy.

While the receipts have greatly increased at Chicago the percentage of the carloads grading Nos. 1, 2 or 3 has not increased, as is shown by the grading of cars of corn received since Dec. 15:

Week Ending	No. 1	No. 2	No. 3	No. 4	No. 5	Sample
Dec. 21...	33	80	246	318	192	20
Dec. 28...	19	63	125	161	135	13
Jan. 4...	18	20	57	102	88	12
Jan. 11...	15	40	139	433	247	45
Jan. 18...	27	36	117	364	268	65

The storing of 1940 corn being more hazardous, its moisture content should rush more of it to the central markets and the night and day driers.

According to the Agricultural Marketing Service, "excess moisture, a result of the late harvest and fall rains, is principally responsible for a larger percentage of the market receipts falling into lower grades this year.

"Of the December inspections this season, 62 percent graded No. 3 or better, compared with 98 percent in these grades last December, and the six-year 1934-39 December average of 58 percent. Thirty-eight percent graded No. 4, 5, and Sample grade in December, 1940, compared with only 2 percent in 1939, and 42 percent the six-year average.

"Unusually warm weather during December and considerable rain in the corn belt retarded conditioning of the crop with the result that moisture ranged above 17.5 percent on nearly 40 percent of the corn inspected during December. An occasional car was reported to be heating but very few arrivals were musty or out of condition. The heaviest moisture grain appeared to be centered in an area in western

Illinois and eastern Iowa where severe storms blew down the corn and made curing difficult."

Pitfalls for Employer in Labor Law

The recent decision by Circuit Judge John D. Martin, sitting in the U. S. District Court of Western Tennessee, emphasizes the necessity for employers to, 1st, learn the application of the Fair Labor Standards Act to their business, and 2d, to adjust the work of their employees so that few will come under the Act.

Tommie Lewis made claim against the Nailling Mill & Lumber Co. for over-time pay. The Court made the following findings of fact and conclusions of law:

The plaintiff, Tommie Lewis, was a regular employee of the defendants from Oct. 24, 1938, and prior thereto, to June 6, 1940, with the exception of a period of six weeks between April 15, 1939, and May 29, 1939.

He was chiefly employed as a truck driver for the defendants, in making deliveries from their plant at Union City, Tenn., to points within the State of Tennessee; but he made occasional deliveries of commodities for the defendants into the State of Kentucky, as a part of his employment. It was his duty, in the course of his employment, to work as a handyman or general utility laborer around the plant of defendants; and do such labor as he was directed to do by his superiors. Among his activities, were the loading of flour and meal and goods on to trucks for transportation to the State of Kentucky and throughout points in Tennessee, also the unloading from railway cars and transporting to the plant flour and feed stuffs shipped from without the State of Tennessee, the sacking of flour, and the tying of bags of meal and flour.

The defendants made only one delivery of their products into the State of Kentucky during each week of plaintiff's employment.

The defendants paid a license tax to the City of Hickman, Kentucky, to operate said truck.

The plaintiff was never a regular driver on said truck; and the weight of the proof shows that the plaintiff made only about six trips into Kentucky as the driver of a truck. The proof shows, however, that including trips made as a helper, he made more than six trips into the State of Kentucky.

On the whole record, the Court finds that the plaintiff as an employee of the defendants was engaged in commerce and in the production of goods for commerce, within the meaning of the Fair Labor Standards Act of 1938.

The defendants' out-of-state sales, made at wholesale, amounted to \$2,529.86, of which, sales at the mill amounted to \$1,296.

The defendants bought \$33,825 of flour and feed stuffs, and shorts, outside the State of Tennessee. They also bought a quantity of lumber, cement, and other building materials outside the State of Tennessee.

The business of the defendants was approximately sixty per cent retail and forty per cent wholesale.

The wholesale business of the defendants consisted entirely in the processing, or blending, of flour and in the manufacturing of meal and feed stuffs, and the sale of such products.

The Court finds that the defendants were, during the period of plaintiff's employment, subject to the provisions of the Fair Labor Standards Act of 1938, including Sections 6(a) and 7(a) thereof.

The Court finds that the plaintiff, Tommie Lewis, is entitled to the sum of \$473.85, for wages earned during the course of his employment, over and above what was paid to him by the defendants. (The Court has found the lump sum due, without incorporating the number of hours and the rate per hour into the findings; because counsel for the parties agree that if the plaintiff is entitled to recovery at all, he is entitled to be allowed the amount stated.)

The Court finds that the plaintiff is entitled to recover, as liquidated damages, the further sum of \$473.85 being an additional equal amount as liquidated damages.

The Court allows the plaintiff to recover of the defendants the further sum of \$200, as a reasonable attorneys' fee to be paid by defendants as compensation to plaintiff's attorneys.

The costs of the action will be paid by the defendants.

The Court finds that defendants' intra-state sales amounted to \$210,413, and their out-of-state sales amounted to \$3,216.

Delivery for Sale or Storage

Hardin Summers hired two truckers to haul 133 bus. in one lot and 198 bus. 50 lbs. in another lot to the elevator of the Peoples Elevator Co. at Rich Hill, Mo. The truckers did not inform the elevator manager whether the wheat was to be stored or sold. Scale tickets were issued, not stating the price.

The last lot of wheat was delivered July 21, 1937, and on Aug. 6 of the following year Summers informed the elevator manager that it had been a sale on delivery. He refused the offer of the market price on Aug. 6, and began suit for the price on dates of delivery, alleging conversion.

The jury gave judgment to Summers for the value of the wheat on dates of delivery, but found there was no conversion.

Defendant elevator manager testified that the absence of a price on the tickets indicated the wheat was to be stored. "If it had been a sale the price would have been on the ticket—particularly specified." Later he admitted that if no instructions to sell or store were given, the price would not be stated on the defendant's records.

On appeal by defendant from the Circuit Court of Bates County the Supreme Court of Missouri, affirming the jury finding, said:

There was no evidence the wheat was stored; it was received, mingled with other wheat and promptly shipped to market by defendant. The defendant argues that section 14396, R. S. 1929, Mo. St. Ann. § 14396, p. 8192, authorized it to mingle the wheat received from plaintiff with other wheat of like grade and to sell and ship from the common mass. Said section provides a warehouseman may mingle fungible goods with other goods of the same kind and grade, and that the various depositors of the mingled goods shall be entitled to such portion thereof as the amount deposited by him bears to the mass, but it does not allow a warehouseman to sell any of the mingled goods.

Moreover, defendant, so far as this record shows, was not a warehouseman; it had not obtained a license as required by section 14353, Mo. St. Ann., nor did it issue warehouse receipts as provided in section 14376, and it therefore is not in position to invoke the provisions of section 14396. We conclude the evidence of the defendant shows the wheat, as a matter of law, was not stored by it.

The wheat in question was delivered into defendant's possession, and then and there plaintiff, as shown by the evidence of both parties, lost control or right of control thereof.

The conclusion is inescapable that defendant took exclusive possession of the wheat and sold it; that neither party to the transaction intended that the identical grain would be returned; that when defendant bought wheat the price to be paid was the market price at the time the grain was delivered.

The only matter in controversy was whether the market price the day the wheat was delivered or the day of demand would be used in determining the price to be paid by the defendant.

We conclude the transactions were, as a matter of law, sales, not bailments, and nothing remains to be done except to pay the purchase price.—136 S. W. Rep. 81.

Loyalty

There can be no degrees in loyalty. Either we give completely of our faith, or else we are not loyal. In business life this quality of loyalty is a precious thing. It binds to us, in the strongest of bonds, those with whom we work. If we sit in the chairs of responsibility, our task becomes a happy one if those whom we guide and direct believe in us, and trust us, and have confidence in us. And if those to whom we owe unswerving loyalty know that we are to be relied upon and can be counted on in fair weather and foul, with what greater confidence can they face the responsibilities that confront them! Loyalty is not to be lightly bestowed—but when we do bestow it, let us honor ourselves by letting nothing break it down. Loyalty transcends even friendship.

Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

Seedsmen and Wage and Hour Law?

Grain & Feed Journals: We would like to know if the Wage and Hour Law applies to seed dealers located in small towns in producing sections surrounded by farmers who do not take kindly to the 40-hour week. Does it make any difference if the business is large or small?—Hofler Seed Co., Nora Springs, Ia.

Ans.: Employees retailing seeds intrastate are exempt. Hybrid seed corn handlers have a seasonal exemption. Exempt also are employees of a buyer of seeds from farmers in the vicinity employing not over 7 persons, under administrative ruling published in the Federal Register July 24, 1940, as follows:

1. An individual shall be regarded as employed in the "area of production" within the meaning of Section 13 (a) (10), in **handling**, packing, storing, ginning, canning of agricultural or horticultural commodities (except perishable or seasonal fresh fruits or vegetables) for market, or in making cheese or butter or other dairy products;

(a) if he performs those operations on materials all of which comes from farms in the **general vicinity** of the establishment where he is employed and the number of employees engaged in those operations in that establishment does not exceed **seven**, or (b) . . . (c) . . . (d) if he performs these operations on materials all of which come from farms in the immediate locality of the establishment where he is employed and the establishment is located in the open country or in a rural community. As used in this subsection (d), "**immediate locality**" shall not include any distance more than **ten miles** and "**open country**" or "**Rural community**" shall not include any city or town of **2,500** or greater population according to the 15th United States Census, 1930.

Exempt from Wage and Hour Law?

Grain & Feed Journals: We are engaged in shipping bulk grain in car load lots. We will employ five persons fifty-two weeks of the year, and at intervals during the rush season we may have two more.

We are interested in determining our status by law whether or not we are liable for Social Security, etc. We are probably classified as country grain dealers. We do no manufacturing, no processing and no retail business.—Massac County Grain Co., by John A Rogers, Metropolis, Ill.

Ans.: The Massac County Grain Co. is exempt from the wage and hour law as handling agricultural commodities from the general vicinity of the establishment and not employing more than seven persons.

The Massac County Grain Co. is exempt from the excise tax on total payroll because it does not, in Illinois, employ six or more persons, for unemployment benefits.

This company comes under the excise tax on all employers, for the old age benefits, on all individuals not receiving over \$3,000 a year. Under this tax the employee is assessed an equal percentage with the employer, deducted from his pay by the employer.

Trade Assesses Itself

It is recorded with a good deal of satisfaction by earnest ass'n workers that when the Grain & Feed Dealers National Ass'n followed vote of its membership at the Louisville convention last October by sending out a voluntary assessment notice, the membership and the trade at large responded whole-heartedly.

Financially, the Grain & Feed Dealers National Ass'n is better off today than it has been for some years, and is in a position to continue the good work it has been performing so well in keeping the trade informed, and maintaining contact between the trade and government bodies which has been highly helpful to country shippers and terminal market receivers alike.

Of the first 200 replies to the voluntary assessment notice more than 40 enclosed a check for an amount greater than asked in the assessment.

Ray O'Brien President Chicago Board of Trade

Philip R. O'Brien, who was elected president of the Chicago Board of Trade Jan. 13, has served as a director and as chairman of the real estate com'ite, where he has worked effectively to increase tenancy in the Board's building.

Mr. O'Brien was born in Chicago 48 years ago, and after leaving high school took 8 years of special courses in evening school. His business career began in 1905 when he entered the employ of J. H. Dole & Co., in their cash grain department. After 5 years he went with a firm handling commercial paper, but returned to the cash grain business with a La Salle street firm.

In 1915 he became a member of the Board of Trade and has since been active as a broker in the wheat pit.

Mr. O'Brien's hobby is farming. Every year he spends three to five months on his dairy farm in Door County, Wis., where he has a herd of pure bred Guernsey cattle. He also has a farm of 1,100 acres in Illinois. He is married and has four children.



Philip R. O'Brien, pres. Chicago Board of Trade.

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same occupation. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Jan. 27. Farm Seed Group of the American Seed Trade Ass'n at the Palmer House, Chicago, Ill.

Jan. 27, 28. Indiana Grain Dealers Ass'n, Columbia Club, Indianapolis, Ind.

Jan. 28, 29, 30. Farmers Grain Dealers Ass'n of Iowa, Savery Hotel, Des Moines, Ia.

Feb. 4, 5, 6. Farmers Grain Dealers Ass'n of North Dakota, Grand Forks, N. D.

Feb. 18, 20. Minnesota Farmers Elevator Ass'n, Hotel Radisson, Minneapolis, Minn.

Feb. 21, 22. Pacific Northwest Feed Ass'n, New Washington Hotel, Seattle, Wash.

Feb. 26, 27. Farmers Grain Dealers Ass'n of Indiana, Spencer Hotel, Marion, Ind.

June 2, 3. The Ohio Grain, Mill & Feed Dealers Ass'n, at the Deshler-Wallick Hotel, Columbus, O.

June 9, 10, 11. Society of Grain Elevator Superintendents, Minneapolis, Minn.

June 12, 13, 14. American Feed Mfrs. Ass'n, Homestead Hotel, Hot Springs, Va.

N. D. Grain Dealers Schedule 3-Day Convention

A full three days of business sessions are scheduled for the annual convention of the North Dakota Farmers Grain Dealers Ass'n, at the Ryan Hotel, Grand Forks, Feb. 4, 5, and 6. The convention program opens officially the morning of Feb. 4, but registration of the early arrivals will start Monday, the 3rd.

Business sessions will be held in the High School Auditorium, where there are plenty of seats for all. Music by the Grainmen's Band will precede all sessions.

Tuesday morning's schedule calls for an address by President Walter Albright, an invocation by Rev. H. R. Harrington, a welcome by Mayor T. H. H. Thoresen, a response by S. E. Olson, a field report by Sec'y C. H. Conaway, and the appointment of com'ites.

Tuesday afternoon will be devoted to an address on crop improvement by W. J. Leary of the N. D. Agricultural College; an address on "Suretyship" by Geo. B. Lanphear, Jr., of Minneapolis, and discussion on country elevator taxes, and the uniform warehouse agreement under the leadership of L. T. Strom.

Only two speakers are billed for Wednesday morning, T. E. Goulding on the operation of a country elevator, and E. S. Ferguson, president of the Minneapolis Chamber of Commerce, on the place of the commission merchant in handling grain. The remainder of this session will be devoted to open discussion on building and maintenance of a country elevator, and on reports of the Public Service Commission.

Wednesday afternoon's session will hear William McArthur of Washington, D. C., on "Operation and Changes in A.A.A."; B. E. Groom, of the Greater North Dakota Ass'n, on "The Future of Agriculture in N. D."; and N. E. Williams of the Fargo traffic council on "Switching Charges and Rates."

Thursday morning session will be addressed by Capt. L. C. Webster of the Northwest Country Elevator Ass'n on "Conflict of State and Federal Laws." Discussions listed include scale inspection and the storage problem. The afternoon session will be given over to reports of com'ites, election of directors, and other ass'n business.

Entertainment schedule includes a theatre party for the ladies Tuesday evening; a big banquet and dance for all on Wednesday night, and a boxing match at the University Armory Thursday night.

Excess Profits Tax Law Explained

By J. S. SEIDMAN, C.P.A. of Seidman & Seidman.

As a result of the new tax law, corporations are now liable for a triple decker of income taxes. First, there is the regular income tax. And then, there are two separate and distinct excess profits taxes.

THE REGULAR INCOME TAX applies to all taxable earnings whether excess or not. The rates run from approximately 15 per cent to 19 per cent when the corporate income for the year is less than \$25,000, and 24 per cent when the income is over \$25,000. One excess profits tax has been in effect for some time. Its rates for 1940 will be from 7 per cent to 13 per cent, depending on how high the earnings go over the value declared by the corporation for its capital stock. The second excess profits tax is the new one. Its rates are from 25 per cent to 50 per cent. At the top rates, the combined effect of these three taxes is a tax of 67 per cent.

THE NEW TAX applies for the calendar year of 1940, or the fiscal year beginning in 1940 for corporations that do not file on a calendar year basis. In figuring the new tax, a corporation may select the more favorable of two ways of determining what profits are excess and what profits are normal. One way makes the earnings experience of 1936 through 1939 the criterion. Ninety-five per cent of the average profits of that period are treated as normal earnings. The 1940 profits above that are taxed. The second way makes the capital investment the controlling thing, and exempts 8 per cent of the investment. Under both the earnings and capital investment methods, there is a flat additional exemption of \$5,000.

Corporations that first get started in 1940 can use only the capital investment method. A special computation applies to corporations that got started between 1936 and 1940. Corpora-

Corporation Income Tax Rates for 1940

REGULAR INCOME TAX

Income under \$25,000:	
First \$5,000	14.85%
Next \$15,000	16.50%
Next \$5,000	18.70%
Income over \$25,000	24.00%

FIRST EXCESS PROFITS TAX

On the income greater than 10% but less than 15% of declared value of capital stock	6.6%
On the income greater than 15% of declared value of capital stock	13.2%

SECOND EXCESS PROFITS TAX

Excess profits:	
First \$20,000	25%
Next \$30,000	30%
Next \$50,000	35%
Next \$150,000	40%
Next \$250,000	45%
Over \$500,000	50%

tions and their 95 per cent owned subsidiaries can at their option file consolidated returns or separate returns.

CAPITAL INVESTMENT is of two kinds—equity capital and borrowed capital. All of the equity capital, but only one-half of the borrowed capital is considered as the capital investment for the purpose of this tax. The equity capital is determined primarily by the amount of cash and property paid into the corporation for stock or surplus, plus accumulated earnings and profits. Borrowed capital is the capital represented by any written promise to pay. This means, in addition to bonded debt and mortgages, bank loans, trade debts and officers credit balances, if in note form.

Under the earnings method, if instead of profits in 1936-1939 there were losses in any of the years, the average is regarded as the results of the best three years, divided by

four. In other words, one loss year, but only one, is figured as zero instead of as a negative quantity. While in the earnings method the dominant factor is the amount of profits, capital investment also plays some part, in that a net increase in the equity capital during 1940 adds to the earnings exemption by 8 per cent of the additional capital, and a net decrease in the equity capital reduces the exemption by 6 per cent of the decrease.

The profits on which this tax is calculated may be altogether different from the profits for regular income tax purposes. One of the most important differences is that in determining excess profits, gain or loss on the sale of securities or other property held over eighteen months is disregarded. So, also, dividends received by the corporation are not considered as part of the taxable income. Furthermore, the regular income tax is treated as a deduction. These adjustments apply not only for 1940 but also for 1936-1939.

In addition, for 1936-1939 (when the higher the income the better for the corporation) no deduction need be made for losses from fire, theft, storm, or demolition or abandonment of property or for AAA taxes repaid to customers, or for abnormal claims or judgments paid by the corporation, even though those items were allowed in 1936-1939 as deductions for income tax purposes. Corporations also get a "break" in that any income in 1940 from recoveries on bad debts is not included in excess profits, while if there is such income in 1936-1939 it need not be eliminated.

Where the capital investment method of determining normal profits is used, there are two additional adjustments. As one-half the borrowed capital is treated as part of the capital investment, one-half the interest on this borrowed capital is eliminated from the income deductions.

The idea behind all these adjustments is to apply the tax only to the regular recurring business profits unaffected by outside windfalls or losses. Toward this end, provision is also made for cases where there is received in 1940 income that is unusual in character or amount and is really applicable to past or future years, such as on long term contracts, or research and patent work going back more than a year, or realization on claims, or change in accounting method. In all such cases, the abnormal amount is taken out of 1940 excess income and thrown back or forward to the years to which they apply. The tax authorities are also empowered to make allowances for any other abnormality in income or capital investment.

Julius Mayer Heads St. Louis Merchants Exchange

Julius Mayer, 35-year-old resident vice president of the Continental Grain Co., was elected president of the St. Louis Merchants Exchange at the annual election held Jan. 8. He succeeds Bert Collins, of the Checkerboard Elevator Co., who automatically became a director.

Mr. Mayer was born at Seeheim, Germany, in 1905. His education was received in German schools. On completion of his education he immediately took passage for this country, where he entered the employ of the Continental Grain Co., at its Chicago office.

With a broad background of study in grain merchandising, and international trade, Mr. Mayer's rise thru the ranks was rapid. Less than a year after the Continental Grain Co. opened an office in St. Louis, and leased the 4,000,000 bu. Missouri Pacific Elevator in the late '20s. Mr. Mayer moved to St. Louis to assume charge of that office as resident vice president.

Mr. Mayer has been an outstandingly successful operator. Under his management the St. Louis interests of the Continental Grain Co. have been expanded to include the 750,000 bu. Brooklyn Street Elevator, the 100,000 bu. Terminal Elevator, and the 700,000 bu. Continental Elevator in addition to the Missouri Pacific Elevator which the company continues to operate under lease.

With the Missouri Pacific Elevator, which is fitted with a marine leg and barge loading facilities, the St. Louis office of the company has been a prominent factor in the development of barge traffic in grain over the Mississippi, Illinois, and tributary rivers.



Julius Mayer, president-elect, Merchants Exchange, St. Louis, Mo.

New Wage-Hour Application

Pending a decision from the Wages-Hours Division on the grain trade's application for seasonal exemption in the storing of grain, President Elmer H. Sexauer of the Grain & Feed Dealers National Ass'n has filed an application for an amendment to the "area of production" definition, increasing the limit thereunder from seven persons to ten persons.

At present persons in country elevators engaged in receiving grain from farmers of their immediate vicinity are exempt from both wages and hours provisions of the Act if not more than seven persons are there employed. President Sexauer now asks that this limitation be raised to 10 persons, following correspondence from the country elevator ass'ns interested in the "area of production" definition.

Early this year the grain trade expects a decision on its application for seasonal (14 weeks) exemption for those engaged in the storing of grain. Hearing on this application was held in Chicago on Dec. 9.

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Union, Okla., Jan. 15.—Wheat acreage, 105%; oats, 85%; corn, 135%; barley, 95%; none plowed up. Beans, none.—Farmers Grain Co., Jim E. Smith.

Junction City, Kan., Jan. 15.—The wheat crop looks better than last year. There are no beans here.—R. H. Christensen, R. H. Christensen Grain Co.

Manilla, Ind.—Wheat condition is good; 110% compared to last year. Can't tell yet what percent will be plowed up, possibly about 25%.—Manilla Grain Co.

Gorham, Kan., Jan. 10.—This locality has been hit hard by winter wheat killing frost. Some fields are a total loss.—The Farmers Grain & Mercantile Co., F. E. Nowak, mgr.

New Canton, Ill., Jan. 17.—Condition of growing wheat, winter early sown, good. Late seeding poor, prospect below average. Soy bean crop was common, about enough left for seed.—Heidloff Elevator Co.

Walton, Kan., Jan. 6.—Lots of rain and snow. Not more than one third of the kafir threshed. Wheat looks very good. No winter killing showing up yet.—Farmers Grain Co., C. E. Spangler, mgr.

Wamego, Kan., Jan. 11.—I have been a little surprised at the number of our pretty good wheat farmers who have been in this week telling us that wheat is definitely hurt by that early freeze.—Wamego Seed & Elvtr. Co., J. O. Ross, mgr.

Kingsdown, Kan., Jan. 15.—About the same wheat acreage planted as last year. Now, I would say none would be plowed up. Looks good. Less feed crops planted this year. They

plowed up wheat last year and planted feed and it grew.—G. M. Porter, Kingsdown Co-op. Eq. Exchange.

Okawville, Ill., Jan. 15.—Wheat acreage about the same as last year. Very heavy infestation with Hessian fly is reported but damage cannot be determined as yet. About 70% of the growing has fly. Should wheat damage be too heavy the ground will be used for peas and soys.—H. A. Joellenbeck, Okawville Farmers Elevator Co.

Enid, Okla., Jan. 6.—About the only thing we can say of the weather is that at the present time there is nothing wrong with it, and the same goes for the growing crop of wheat. To be sure there has been some complaint in Kansas about wheat freezing out and another complaint regarding the spreading of leaf rust and some stem rust, but we have heard nothing of the kind in Oklahoma except a report of some leaf rust in one district.—E. R. Humphrey, sec'y, Oklahoma Grain & Feed Dealers Ass'n.

Winchester, Ind., Jan. 18.—Wheat looks splendid, couldn't be better. Grain business has picked up a little as there is a movement of soybeans just now. Our connections say 25% of the beans threshed are back in the farmers' and country elevators' hands. One elevator reports he will buy more beans from now until first of May than he bought on the crop. The sealed corn in Indiana has pretty well disappeared. We heard from Hamilton County today which had several thousand bushel sealed, 1939 crop, say it is gone and some of the 1940 crop is being moved. All of the 1938 and 1939 crop is gone and this up-swing in the price of hogs has made a demand for both corn and feeds.—Goodrich Bros. Co., P. E. Goodrich, pres.

Fort Worth, Tex., Jan. 7.—Rainfall recorded at Fort Worth over a period of the last five years shows this to have been the wettest year since 1932. The 1940 aggregate was 41.65 inches and December, with its 4.72 inches was the dampest since 1937, when 5.31 inches of rain fell. Against the 41.65 inches for 1940 total weathermen noted the all-time record of 51.03 inches in 1932. While this does not reflect true conditions prevailing over the entire state, it does justify the statement that all sections of Texas have received more rainfall than they did in 1939, and in the Panhandle section, which produces most of our wheat crop, the rainfall for 1940 was from 25 to 60% more than in 1939. Crop conditions at present could not be better, and with the exception of bottom lands in North Texas Central area, where some fields are showing yellow spots account of too much moisture, crop conditions are perfect.—G. E. Blewett, vice-pres., gen'l mgr., Ft. Worth Elevators & Wholesaling Co.

The personnel of the U. S. Dept. of Agriculture increased from 27,350 in 1932 to 79,035 in 1940.

Producers of grain and live stock began a drive last week to protect the domestic market from a threatened flood of competitive imports from South American countries. The threat of market invasion lay in a proposal of Secretary of the Navy Frank Knox that all barriers in trade between the United States and the South American nations be removed.

R. E. Swenson President of Kansas City Board of Trade

Roy E. Swenson, who has been vice president, recently was elected president of the Kansas City Board of Trade for 1941.

Beginning in 1916 as office boy with the Washburn Crosby Co. at Minneapolis, Minn., Mr. Swenson has remained with that company and its successor, General Mills, removing to Kansas City in 1922 when the company engaged in milling at that point. Soon after his employment he was placed in the grain department, and at Kansas City took charge of the grain end of the business, now being a vice president of the central division of General Mills, Inc., one of the largest wheat buyers of the Southwest.

Mr. Swenson is an enthusiastic follower of the football game, and a rooter for the Minnesota elevens.

Commodity Credit Corp. Revises Forms

The Commodity Credit Corp. has revised its forms and procedure in making returns and paying charges of country shippers. This revision enables it to abide by all government regulations covering records and approvals. Yet, coupled with better organization of departments thru which papers must pass, it speeds up handling of charges and claims in a way that promises to clear up soon the backlog of country shipper invoices on which payment is still pending. When this job is accomplished it is expected that returns on shipments, and payment of invoices will be made in a period of time comparable to the time required by any similarly large and busy institution.

Basis for the revised forms and system is the theory that each carload of grain shipped by a country grain dealer and received by the Commodity Credit Corp. is an individual, separate transaction.

Now accompanying checks mailed by the Commodity Credit Corp. to satisfy invoices of grain dealers, is a form CCC-9-A (Revised) detailing all facts regarding the payment. On this form is described the charges. The amount claimed, the amount suspended (if any) and the amount approved are shown. This makes a complete record of payment on the invoice, which gives a reason when some invoiced item is not recognized with payment, or when deductions are made for transit losses or grade deficiencies.

Grain dealers have noticed a statement appearing at the bottom of this payment record. This statement reads:

Please note that the enclosed check does not include settlement for transit gains, if any, in connection with the shipments listed in your invoice, payment of which the Corporation cannot consider until written claim is submitted by you. For your convenience, blank forms are enclosed which may be used for this purpose.

THIS DEMAND that a claim be made for any additional settlement on over-runs follows government procedure on records. In a similar manner, if a man makes an over payment on his income tax, this over payment will not be returned to him unless he makes written claim for it. But the Commodity Credit Corporation does enable the shipper to institute claim, by including forms for this purpose, which can be filled out and mailed back immediately to speed payment for over-runs; and the necessary information for filling out this form is supplied in the form of a "Schedule of Transit Losses or Gains," which is also a part of the record.

The latter form, CCC-8-B-2, shows the date of shipment, the car number and initials, the country shipping weight in bushels, the destination weight in bushels, the transit loss in bushels, or transit gain (over-run) in bushels, the f.o.b. country (on track) price, and the transit loss value. This form is filled out for each car listed in the elevator's invoice. Thus all information necessary to filling out the claim for transit gains is supplied to the country shipper.

THE CLAIM for transit gains (CCC Form Z-3) is simple enough. It provides spaces for recording the date of the original invoice, the date the car was shipped, the car number and initials, the country shipping weight in bushels, the destination unloading weight in bushels, the transit gain in bushels, the f.o.b. country price, and the transit gain value. Then a statement is provided at the bottom of the form to enable the warehouseman to certify that the claim is correct and just, that payment for it has not been received, and that no state or local taxes are included in the billing. Filling out and mailing this form to the C.C.C. starts it auto-

[Concluded on page 75.]



Roy E. Swenson, Pres. Kansas City Board of Trade.

Indian Meal Moth Becoming Destructive

In a number of Illinois elevators doing a storage business, particularly those elevators that are surrounded by steel tanks in which is stored Commodity Credit Corporation corn, infestation by the Indian meal moth is reported. The steel bins are also badly infested.

The conditions under which the government corn is stored, abetted by the weather, have aided the breeding of the pest to an extent that is unprecedented.

W. P. Flint, chief entomologist of the Illinois Natural History Survey, reports that "In the vicinity of Onarga there has been some trouble; in fact, over a good part of the state the Indian meal moth has been troublesome."

Professor Flint was scheduled to discuss the grain insect problems at a dinner meeting with Illinois grain dealers at Onarga, Jan. 23.

Requiring only 30 to 40 days to mature a brood, and breeding continuously thruout the year with mild temperatures, there may be as many as four to six broods a year.

The eggs are minute and white and are deposited to the number of 350, singly and in groups of from three to a dozen or more, upon whatever substance the female may select for the sustenance of her offspring. In four or more days they hatch, and in four or more weeks another brood is produced.

The caterpillars spin a certain amount of silk as they feed, joining together particles of their food and excrement, and thus injure for food several times the amount of material they consume. When fully matured they crawl hither and thither, trailing large quantities of their silken threads after them, in their search for a suitable place for transformation, and finally surround themselves in a cylindrical silken web, in which they change to chrysalids and then to moths.

The larvae feed upon grains, grain products, dried fruits, nuts, and a rather wide variety of foodstuffs. When full grown the larvae are about half an inch long, dirty white, varying sometimes to greenish and pinkish hues.

The moth (*Plodia interpunctella*) is a rather handsome moth with a wing expanse of nearly three-fourths of an inch. It is easily distinguishable from other grain pests by the peculiar markings of its forewings. These are reddish brown, with a coppery luster on the outer two-thirds, but whitish gray on the inner or body end.

An effective fumigant for the Indian meal moth is hydrocyanic acid gas generated conveniently from calcium cyanide, in granular or powder form, thrown on top of the grain in the bin, where it reacts with dampness in the air to give off the deadly gas. White corn and polished rice should not be fumigated with calcium cyanide, since grains having white surfaces are likely to be spotted with yellow by the treatment.

It is best to cover the surface of the grain being fumigated with a tarpaulin to hold the gas long enough to kill the insects. Ten pounds per thousand bushels will give a good-kill, leaving the treated grain in the bin for at least

three days. If the walls of the bin leak air, more may be needed.

If there is reason to believe the insect has penetrated down thru the mass of grain it is advisable to use a heavier gas, such as chloropicrin, that will sink down thru after being poured on top of the grain. For every 1,000 bus. placed in the bin use 2 pounds of chloropicrin, sprinkling the liquid evenly over the surface.

Corn Loans Over 24,000,000 Bushels

Total corn loans for the 1941 program reported to the Commodity Credit Corporation as of January 11 were 24,442,171 bus. valued at \$14,890,110.29 the Commodity Credit Corporation has announced. Corporation officials explained that due to the time lag between the execution of loan papers in the field and the final report through the regional office of the Corporation that this total did not reflect the full total of loans in process on that date.

Only two repossessions of corn from the loans by farmers were reported for the period one in Iowa for a total of 1,993 bus., and one in Missouri for 1,445 bus. Loans by states follow.

State	No. of Loans	Bushels	Amount
Illinois	4,926	5,194,698	\$3,168,685.36
Indiana	412	359,120	219,059.34
Iowa	12,724	12,711,103	7,753,617.23
Kansas	125	84,378	50,581.52
Michigan	1	166	101.26
Minnesota	1,773	1,391,430	845,296.00
Missouri	1,178	931,177	567,461.18
Nebraska	3,177	2,871,954	1,749,443.09
North Dakota	48	57,088	26,217.94
Ohio	175	93,472	57,017.92
S. Dakota	1,055	746,068	451,704.08
Wisconsin	3	1,517	925.37
TOTAL	25,597	24,442,171	\$14,890,110.29

Future Trading Reduces Cost of Distribution

Sec'y of Agriculture Henry A. Wallace in his annual report states that:

As compared with the 10-year (1930-39) annual average volumes, futures trading in cotton declined 30 per cent, and in the four grains, combined, 29 per cent. The principal factor in this decline has been the Government loan program, which has reduced the volume of speculation in the futures markets for cotton, wheat, and corn.

The loan program has had a stabilizing influence on price and has operated as a form of price insurance insofar as the producer is concerned. It has not, however, removed the need for hedging on the part of grain and cotton dealers. Thus far, at least, a quite full use has been made of the futures market for hedging purposes. Narrow operating margins cannot be maintained unless dealers and merchants can be protected against even moderate price fluctuations.

Without the opportunity to hedge and shift the risk of price change, merchants and dealers necessarily would have to assume a speculative risk in the actual commodity. To compensate for the risk of carrying the commodity unhedged, they probably would increase their operating margins. To this extent the futures market tends to facilitate marketing and to reduce the cost of distribution for some commodities.

Certain changes in the composition and behavior of the futures markets, which may partly reflect the longer trend aspects of the commodity loan program, are now being studied. It is not yet clear to what extent they result from underlying conditions or from individual trading techniques.

The farm program is likely to produce many new problems with respect to Federal supervision of the futures markets, and these problems must be recognized as they arise. As the objectives of the program change, the response of the interests affected, including that of the nation as a whole, may be expected to influence the methods and the use of the futures market.

The Grain Trade Suffers with Other Industries

"Whether we like it or not," C. L. Bardo, president of the National Association of Manufacturers, says, "industry has been forced in sheer self-defense to enter the political arena or be destroyed as a private enterprise."

"We have found out what the power of government means; we have experienced the tyranny of public agencies, of their minute control and arrogant interference, and their arbitrary regulation of our business and daily life."

"For the last two years industry has been driven to the cyclone cellar. Normal problems of the depression were magnified many times by a deliberate and well timed, rapid fire, devastating attack by economic crackpots, social reformers, and labor racketeers. This attack, without question, was the most savage concerted political attempt ever made toward the destruction of our industrial system."

New Use for Rice Hulls

By J.H.G.

Altho the production of rice in Arkansas fell to approximately 8,000,000 bus. when the threshers ceased operations, with prices in all varieties generally below those of last year, there is an optimistic feeling in the rice region.

The decreased production is certain to leave smaller carry over.

The largest construction activity during 1940 was carried on by the Arkansas Rice Growers' Cooperative Ass'n in the building of an additional elevator and a house for the accumulation of rice hulls for shipment.

The last year brought a new use for rice hulls which the association had been burning. Experiments of steel makers revealed that rice hulls could be employed more successfully in the cooling of steel than the materials they had been using. The association has contracted with a large steel company for the sale of its entire output of hulls.

Gypsy Truckers Tamper with Scales

Garfield county officers were driving hard Monday to wind up an investigation of what they believe to be one of the newest and cleverest "gyp" games.

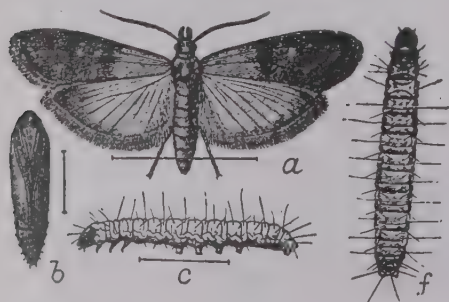
One man was being held in the county jail, another was sought and two heavy trailer transport trucks loaded with wheat were being held as the inquiry proceeded, Deputy Sheriff Coyle said.

A firm in St. Joseph, Mo., operating several trucks, has been hauling shelled corn into Oklahoma, selling it to feed stores and others. Then the trucks load with wheat and transport it to Missouri mills.

A Garber elevator, where two loads of wheat were purchased about two weeks ago, and two loads again were purchased Saturday, believes it has been flim-flammed out of considerable wheat. When the truck drivers went to the elevator to purchase wheat the operator at the elevator started to elevate the wheat and watched the truck as it was loaded.

Coyle alleges that one or more truck drivers climbed to the top of the elevator where an automatic scale is installed, and that they tinkered with the automatic weigher so that it failed to register all grain spouted to the trucks. In fact, Coyle said, one of the trucks stopped Saturday and had 43 bushels in excess of what had been actually purchased.

Coyle also alleged that the driver of one of the trucks, being followed by him and Frank Wilson, Garber police chief, deliberately tried to run his truck into a roadside ditch and spill a quantity of wheat so it would be impossible to check. The driver of this truck then abandoned the truck and fled afoot.—Enid (Okla.) Daily Eagle.



Indian Meal Moth; a, Moth; b, Chrysalis; c, Caterpillar; f, Dorsal View. After Chittenden.

From Abroad

Manchuria's first official estimate of its soybean crop is 161,000,000 bus., compared with 145,000,000 bus. in 1939, 157,000,000 bus. in 1938.

Spain is reported to have received a 7,500 ton cargo of much needed wheat from Argentina early this month. Spain is suffering an acute shortage of wheat. Spanish officials disclose successful negotiations for bringing food supplies thru the British blockade.

Australia's wheat board has announced receipt of 195,700,000 bus. of wheat last year, but 25,200,000 bus. remained unsold at the close of 1940. A total of 35,500,000 remained unshipped, including 20,000,000 bus. for the United Kingdom. Current estimate for the 1941 crop is 82,400,000 bus.

Belgium's per capita bread ration is 225 grams per day, equal to about 56 ounces a week. Netherlands allowance is 71 ounces; France, 70; Poland, 35; Germany, 80; Denmark, 53 rye and 18 white. The rye bread allowance in the latter is reported to have been increased one-third for the first quarter of the year.

China, Manchuria and Japan are estimated to have produced a combined 1940 wheat crop of 798,000,000 bus., compared with 763,000,000 bus. in 1939. The Chinese crop is placed at 700,000,000 bus. compared with 667,000,000; the Manchurian crop, 32,000,000 against 35,000,000; the Japanese crop, 66,000,000 against 61,000,000. The Chosen 1940 wheat crop is estimated at 20% below the 12,565,000 bus. raised in 1939.

German-Russian signing of pacts to continue their trade agreement on an enlarged scale is reported to involve large quantities of grains. DNB, official German news agency, called it "the greatest grain deal in history." The new pacts run until Aug. 1, 1942, and are claimed to constitute a carefully worked out "economic plan." Russia is reported to be sending a delegation to Buenos Aires, to negotiate for grain with which the Argentine is overflowing.

Twelve Protective Suggestions

Twelve suggestions for safeguarding the elevator against the fire hazard appear on the 12 monthly sheets of the 1941 calendar of the Grain Insurance & Guarantee Co., Winnipeg, Man. They are excellent suggestions, made in keeping with the time of the year covered by the sheet on which they appear. Carefully followed, they will prevent many of the country elevator fires that stand as the principal reasons for elevator operators buying insurance protection. The suggestions propose:

"Make fire prevention a habit. Constantly endeavor to safeguard the property from fire. A clean and tidy elevator is the first requirement.

"As there is danger of the elevator heaving when the frost comes out of the ground, watch the alignment of the shafting.

"Maintain a standard fireguard. It must be six feet wide around all buildings. Cut and remove grass within 20 ft. of all buildings." It anticipates that the weather may turn dry, and prairie fires become a possibility.

"Your elevator is rodded to protect it against lightning, but light and telephone wires may carry a surge into the building. Stand by your elevator during lightning storms.

"Keep all doors and windows securely fastened at night.

"Prepare for the busy season by checking over the entire plant. Prevent tie-ups.

"Check and oil all machinery every evening. This will prevent fire at night and delay in the morning." Sounds like a smart idea at almost any season of the year.

"Check over your stovepipes and chimney. Replace rusted pipes and burned-out grates." This October thought anticipates winter's cold and snow.

"Blow out the air line to keep it from freezing. Do not use a blowtorch or open flame for thawing frozen line.

"Provide metal containers for matches, oily waste and paper refuse. Take precautions, but do not take chances." Metal containers are fire-proof, but they must be kept away from inflammable material to be entirely safe, should a glowing match or cigarette butt set their contents aflame.

"Cooperate with the inspectors." The real reason for an inspection is to help the owner correct fire hazards around his elevator and thereby reduce his cost for fire protection.

Protein in Wheat Down a Little

Compilations from the inspection reports of the Kansas Grain inspection department's Kansas City, Mo., office, show the average protein content of 535 cars of all classes of wheat inspected in December to be 13.99%. The average of 304 cars inspected by the Missouri inspection department's Kansas City office was 13.35%. The average for both departments was 13.76%, compared with 13.93% on 1,009 cars inspected in December, 1939.

Figures compiled by the Kansas department on 18,155 cars inspected during the crop year to date (July-December, inclusive) gave average protein content of 13.13%, compared with 13.66% on 15,177 cars inspected during the same period a year ago. The Missouri average for the same period was 12.71% on 11,385 cars, compared with 13.48% on 12,199 cars, in 1939.

Market averages of 12.96% protein are shown on the total of 29,540 cars inspected at Kansas City for the period July 1 to Dec. 31st, compared with 13.58% on the aggregate of 27,376 cars inspected during the same period in 1939.

Make the Manlift Safe

A few days ago, in one of our plants, a screw driver came zinging down along side the man-hoist. It hit a man using the hoist, striking him a glancing blow on the head. He was not seriously injured.

There is no getting away from it, manhoists are dangerous. So many of us use them so often that we forget the danger.

A man riding a man-hoist is using an unprotected shaftway. He does not have a roof over his head, he has no guards around him. He is standing on a small step, holding on a handle, and suspended on a moving belt in a hole right down thru the building.

We can't be too strict in our enforcement of the rule that nothing but a man should be carried on a manlift. It is so easy to get lax on this point. Someone from the office sticks a scratch pad under his arm and steps on. Then someone with an empty sample pan tries it. Then someone with two or three sample pans full or partly full get on. Someone from the office has a brief case and wants to get up quickly. A man coming to work with his lunch or a bundle of clean clothes. Where does it stop or where does it begin?

Actually there is only one safe rule—nothing on the hoist but men; and in their pockets, nothing that doesn't belong there.

Most plants are rather strict in enforcing this rule, but it is so easy to break over that we feel this warning should be read by all.

In one of our plants there are two ways of getting to the scale floor. One way is on the hoist and the other up the steps. Whenever the scales are to be inspected by the inspectors, several hundred 50 lb. weights have to go up to the scale floor.

This plant uses a lot of precautions, but the fact remains that the weights are put on the steps one at a time and elevated. No one is allowed on the hoist during this time.

From a strict safety standpoint, there is no compromise. This should not be done. If the company, in designing this building, put only the man-hoist and the steps in this building, then the steps should be used for the transportation of anything but men.

Another point is the protection of the shaft-

way. Sometime ago we heard of material piled too high around the shaftway on an upper floor and one bag worked loose and fell down. No one was on the hoist at the time, but what might have happened?

Man-hoists are dangerous, anyway that we look at it. There must be no letting down of the bars on safe use of the hoist.—National Safety Council.

Western Canadian farmers wishing to contribute to Canada's war financing, have been authorized to make deliveries of wheat above established quotas at country points until July 31 in exchange for war savings stamps and certificates.

Philip C. Kamm

Philip C. Kamm, veteran grain dealer and oldest member of the Milwaukee Grain and Stock Exchange, passed away Jan. 12, after a brief illness. He was 86 years old.

Mr. Kamm was born in Weisenthid, Bavaria, April 15, 1854. His first trip to America was in 1873, when he spent a short time in Springfield, O. From there he went back to Germany, but soon returned to settle in Hamilton, O., where he owned and managed the West Hamilton Brewery.

Later he turned to selling brewery supplies for Ullman & Busch. Upon dissolution of this concern, he went to Milwaukee, liked the city, and settled there. Here he joined the old Asmuth brewery supply house. The next step led him into the feed and grain business.

Together with the late Max Hottelot he formed a partnership which dissolved in 1891 when Mr. Kamm engaged in the grain and feed business on his own account, which business was operated under the style of P. C. Kamm & Co.

In 1913 Mr. Kamm decided to expand his business. A corporation was formed under the name of P. C. Kamm Co. The corporation built a modern grain elevator which it has operated continually ever since. Mr. Kamm was president of the corporation.

Soon after coming to Milwaukee, Mr. Kamm became associated with a number of civic, fraternal, and recreational organizations. In November, 1939, the Richard Wagner Lodge, Knights of Pythias, presented him with a jewel betokening 50 years of membership and honored him as its oldest and only living charter member.

Mr. Kamm is survived by a son, Conrad C. Kamm, vice president of the P. C. Kamm Co.



Philip C. Kamm, Milwaukee, Wis., Deceased

Henderson, (Ky.) Elevator Co's Transfer House

At Henderson, Ky., close to the point where the Illinois Central and the Louisville & Nashville railroads meet to use the same passenger station, stands the cribbed steel-clad transfer elevator of the Henderson Elevator Co.

The 112 ft. high structure is 60 ft. wide, 170 ft. long. Separated from it by a track-shed only is a warehouse 50 ft. wide and 100 ft. long. On its opposite side, across a 12 ft. wide truck receiving driveway, is a 20x40 ft. crib. The crib is divided longitudinally into two compartments, with a drag in a V-shaped runway between them.

THE ELEVATOR has 25 bins to give it a total capacity for 80,000 bus. of bulk grain. All are overhead bins, and each is cribbed up from 2x6s.

At one end of the work floor is a mixing hopper into which all of the bins in that end of the house spout directly for mixing purposes. Grain from other bins may be run thru this mixing hopper by a simple expedient

of transferring it thru an intermediate leg.

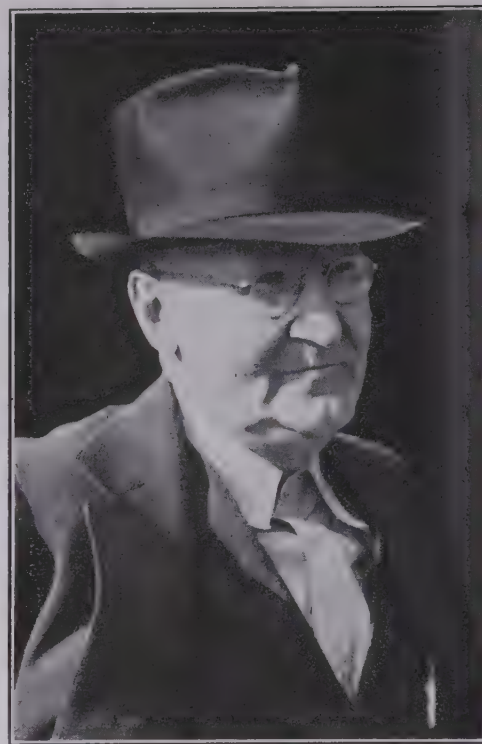
MACHINERY in the elevator is simple, covering the essentials of receiving, weighing, cleaning, transferring and sacking.

For receiving carlots of grain a power car puller to drag cars onto the tracks of a Fairbanks track scale. A Clark power car shovel unloads cars thru two trap-door covered hoppers, from which a conveyor belt carries the grain into elevating legs.

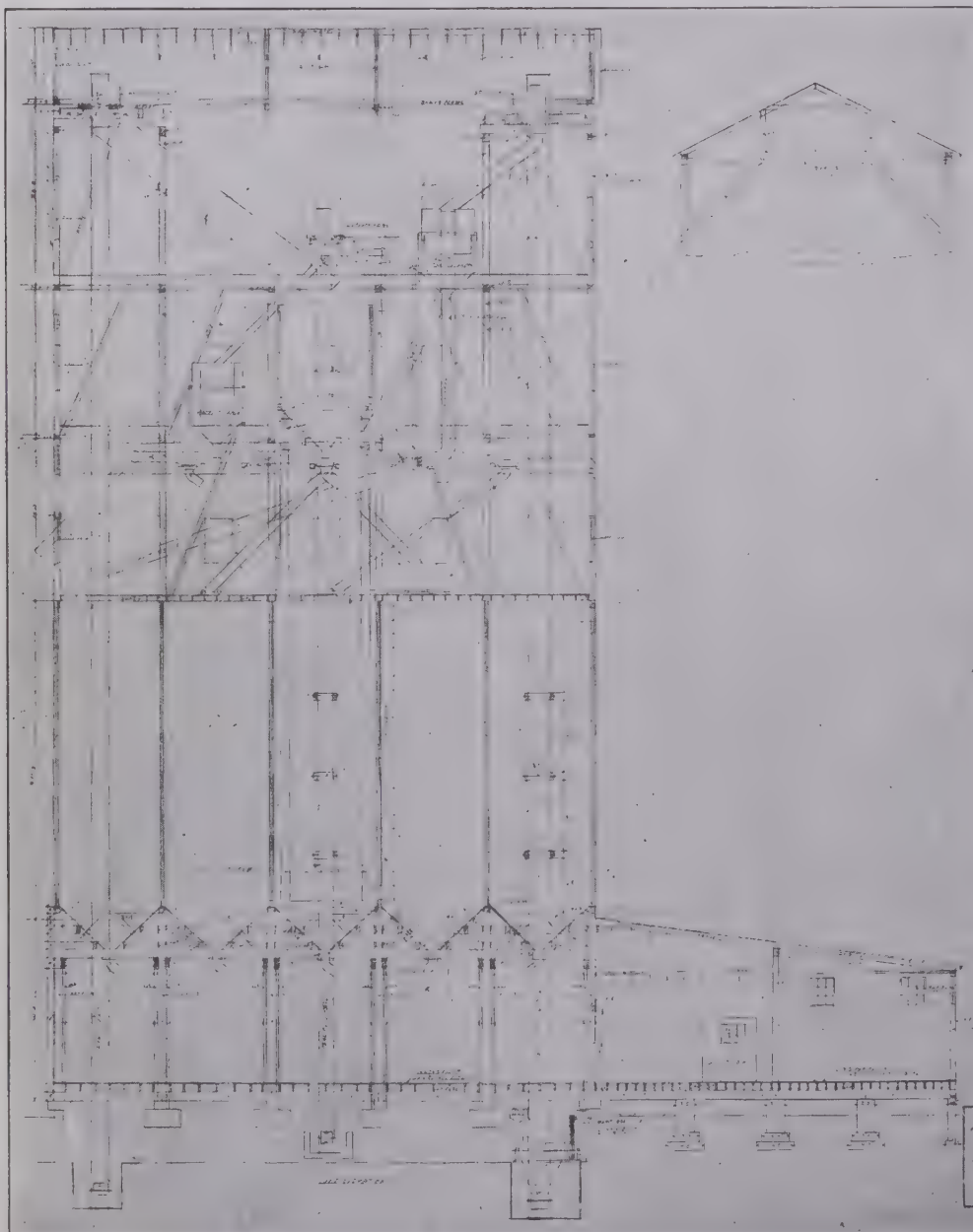
The principal elevating leg carries 20x7 inch Salem buckets on a 22 inch rubber covered cup belt driven by a 20 h.p. squirrel-cage motor. This leg empties grain into a 100,000 lb. capacity Fairbanks hopper scale in the cupola. A system of bell signals tells the weighman when a car is emptied. A speaking tube establishes communication with the receiving sinks.

The second receiving leg carries 14x7 inch buckets. This also is driven by a 20 h.p. motor.

Two transfer legs carry 12x7 inch DP cups.



T. B. Crawley, Henderson, Ky., Supt., Henderson Elevator Co.



Side elevation of Henderson Elevator Co.'s 80,000-bu. transfer elevator at Henderson, Ky.

Each is driven by a geared-head motor, one a 10 hp., the other a 15 h.p.

BELOW the top cupola floor is the cleaning floor, where a 2,000 bu. per hour Western gyrating cleaner separates cobs, shucks and dust from shelled corn. Beeswings and dust, instead of landing in the customary dust-house, are blown a long distance thru wind trunking to the company's feed plant across a roadway and near the office. Cobs and shucks fall thru a spout to a drag that carries them about 100 ft. from the elevator to drop behind a steel fire screen and be burned.

Two long telescoping spouts on the distributing floor travel on heavy beams to be spotted under spout openings from the legs and under the cleaning machine.

FIVE BINS have outlets in a sacking room. A 3 bu. Richardson automatic sacking scale in this room is mounted on casters so it may be pushed under any of the spout openings for filling sacks. Two sheet metal lined chutes from this room converge into one to lead across the two-track car shed and the warehouse adjoining it to a door in the far side of the warehouse opening on a sack loading track. When sacked grain is to be stored in the warehouse, a cut-off in this chute drops the filled sacks near the door, from which they are hand-trucked to be manually arranged in convenient piles in this huge single-story structure.

THE BULK GRAIN loading track parallels the receiving track in the car shed. A single flexible car loading spout swings from a center beam to be roped into position for loading cars and deflects grain from a loading spout leading from the hopper scale in the cupola.

TWO TRUCK LOAD receiving pits in the driveway on the north side of the elevator are preceded by a 10 ton Fairbanks truck scale. A 5 h.p. Western overhead truck lift is carried on a separate frame and moves back and forth to dump truck loads into the small grain or the ear corn receiving pits.

The small grain moves directly into the boot of an elevating leg. The ear corn pit has a drag to push ear corn into the hopper of an ear corn leg, which has 7x16 inch cups to elevate it into either of the two crib compartments or thru a spout to the return drag from the crib whereby it reaches the sheller. The sheller is a Western, with capacity for



Cobs are dragged 100 feet from the Henderson (Ky.) Elevator and dropped behind wall of sheet steel

handling 1,600 to 2,000 bus. of ear corn per hour. Shelled corn and cobs enter the same leg used for small grain, for elevation to the cleaner in the cupola.

A HESS DRIER is in a brick structure a few feet from the elevator. A steam boiler supplies the heat. Fans do the cooling. Fuse boxes for all of the power in the elevator are centered in a separate locked room at one end of the elevator.

FIRE EXTINGUISHERS are plentiful around the plant. The company's old elevator was destroyed by fire. Powerful chemical extinguishers are a precaution against the disastrous effects of another blaze.

THE HENDERSON ELEVATOR CO. operates a small feed plant in connection with its elevator. This is located in a separate building of frame iron-clad construction. In it is a molasses mixer, a Jay Bee hammer mill, a one-ton tumbling feed mixer and an S. Howes packer.

PRINCIPAL business of the Henderson Elevator Co. is buying, receiving and re-shipping wheat, corn and oats. Once it did a thriving business in reshipping sacked grain, but today most of its carlot shipments move out in bulk.

It is an old firm, first organized in 1896, and reorganized in 1916. Present officers of the company are C. M. Bullitt, president; Orie Stith, secretary, and H. H. Bullitt, treasurer.

T. B. CRAWLEY, the elevator superintendent, who has been associated with the company for over 30 years, has his office at one end of the elevator. With the aid of an experienced elevator construction foreman, he followed the blueprints prepared by Reliance Construction Co. in building the new house.

Soybean Oil Meal, Its Value and Uses

By DR. J. W. HAYWARD, at Colorado State College Nutrition School

Nearly 65 per cent of the 1939 crop was processed, yielding a total of 1,331,200 tons of soybean oil meal. This is some 33 times the meal production ten years ago. The raising of soybeans for a grain crop is largely confined to the corn belt states of Illinois, Indiana, Iowa and Ohio. These states are listed in the order of rank as to production of beans for 1939. For the fifth ranking state, we turn to North Carolina. These five states have been producing for the past few years about 95 per cent of all harvested soybeans.

Illinois alone has been producing better than 50 per cent of the total harvested bushels of soybeans. Soybeans are grown to some extent in practically all of our states but expansion has been slow in most of them on soybeans harvested as beans. The principal handicap is the development of varieties adaptable to these new areas.

PROCESSING PLANTS, especially adapted to soybeans, have become numerous in the past several years and have more than kept up with the increase in production. The principal products derived from processing soybeans are soybean oil meal and soybean oil. About 95 per cent of the total meal produced is used as a protein supplement in feeds for livestock and poultry. Approximately 85 per cent of the soybean oil is used in food products, such as oleomargarine, vegetable shortenings and salad oils.

THREE DIFFERENT METHODS OF PROCESSING are employed for the manu-

facture of soybean oil meal. These are the hydraulic, expeller and extraction (solvent) methods. The hydraulic and expeller methods produce what is commonly known to the trade as 41 per cent or old process soybean oil meal. Soybean oil meal manufactured by the "extraction" process is known as 44 per cent or new process soybean oil meal.

It has been adequately demonstrated by numerous feeding tests that soybean oil meal must be properly heat treated to give its proteins a satisfactory feeding value for such critical animals as hogs, lambs, calves, dogs, foxes, chickens, ducks and turkeys. The necessary heat treatment should be applied in the manufacture of soybean oil meal. If this is done a satisfactory soybean oil meal can be produced by each method of processing.

Raw uncooked soybeans contain inferior protein for growth of critical animals. Soybeans also contain an excess of oil not conducive to best results with most animals.

GUARANTIES.—Soybean oil meals produced by the hydraulic and expeller methods are guaranteed to contain a minimum of 41 per cent protein and 4 per cent of fat or oil (ether extract). The guaranties on the "extracted" meal are a minimum of 44 per cent protein and .5 per cent of fat. The composition other than protein for these three kinds of meals is for all practical purposes the same; namely, fiber, 5.5-6.5 per cent; N. F. E., 29-30 per cent; ash, 5.5 per cent; calcium, .3 per cent; phosphorus, .6 per cent; Vitamin B₁, usually 1 or less than 1 I. U. per gram; Vitamin G or riboflavin, 4 micrograms per gram; soybean phosphatides, 2-2.5 per cent.

AMONG THE PROTEINS of vegetable origin, soybean oil meal has no superior for feeding livestock and poultry. It contains proteins which are the highest in digestibility and even more important, the protein of soybean oil meal is more complete than proteins of other supplements of vegetable origin and many proteins of animal origin in its content of amino acids essential for growth, egg, wool and milk production.

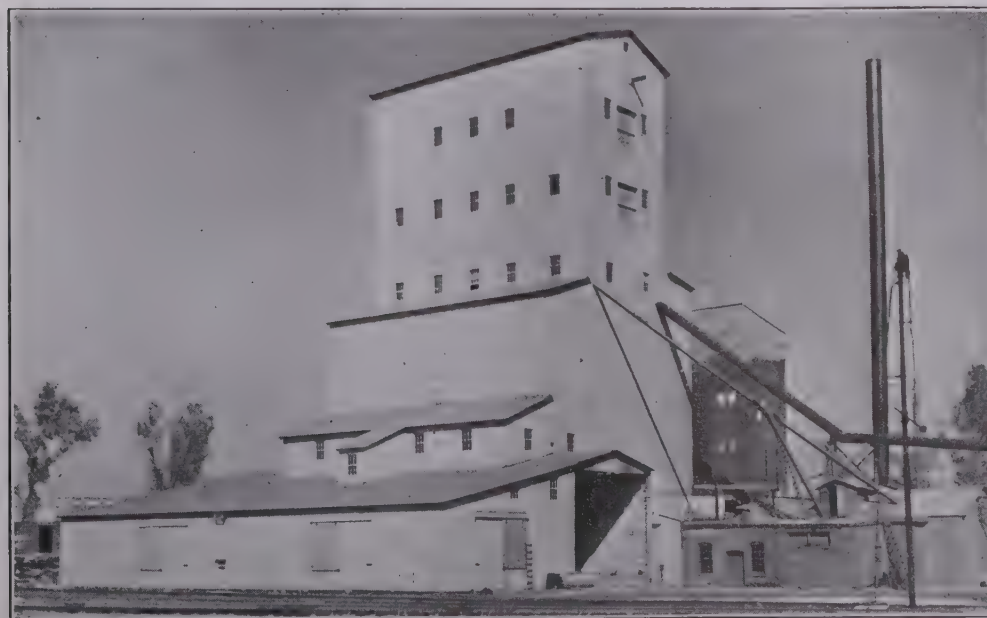
Soybean oil meal is extensively used in protein feeds for all kinds of livestock and poultry. It is available as meal, flakes and pellets of all sizes for cattle and sheep in the feed lot or on the range. It can satisfactorily replace cottonseed meal or any other protein supplement commonly used. On the range it is a good practice to supplement all vegetable protein feeds, including soybean oil meal, with minerals, especially bone meal and possibly ground limestone and, of course, salt.

In recent months certain interests have expressed the opinion that soybean oil meal in fattening rations has been responsible for some yellow, low-grading beef and lamb carcasses. These claims are entirely without basis of fact. A summary of the numerous experiments conducted at the various agricultural experiment stations indicates that soybean oil meal has never adversely affected carcass quality.

Soybean oil meal is rapidly gaining favor in mixed protein supplements for hogs. Supplements containing 40-50 per cent of soybean oil meal, 20 per cent fish meal, 20 per cent tankage, 10 per cent linseed meal or cottonseed meal and for dry lot feeding 10 per cent of alfalfa leaf meal, have proven far superior to tankage or any other single protein supplement for growing and fattening hogs. In these instances, a simple mineral mixture has been fed free choice.

IN POULTRY RATIONS.—Soybean oil meal is very popular in all kinds of poultry rations. Here it usually replaces a part of such animal proteins as meat scraps and fish meal. If the formula is adequate in all the known nutritional essentials, soybean oil meal can be stepped up to 12 and even 16 per cent in all mash chick starters and in growing and laying mashers. Even higher levels are profitably used in turkey feeds. The advantage of appreciable

[Concluded on page 66.]



Rebuilt Plant Henderson Elevator Co., Henderson, Ky.

Patents Granted

[Since last publication in the Journal.]

2,226,741. Hammer Mill. Oliver W. Randolph, Toledo, O. A material subdividing machine of the hammer mill type, comprising a housing having a top section and a base section, a horizontal shaft, beater-supporting means carried by shaft, beaters loosely pivoted on supporting means, a pair of foraminous screen sections of arcuate form carried by the housing base section below said shaft and concentric therewith, said screen sections cooperating to form a generally semi-cylindrical screen, a bar carried by housing base section and serving as an abutment in which the lower termini of screen sections detachably seat, said top housing section being generally fixed to base housing section and being provided with opposed radially removable sections carrying abrading portions.

2,226,429. Attrition Mill. Wm. F. Hall, assignor to Sprout Waldron & Co., Muncy, Pa. 1. In an attrition mill, a shearing head, a plurality of teeth arranged on a face of shearing head and adapted to cooperate with similar teeth on an opposite face, each of said teeth having a plurality of faces arranged to provide a plurality of shearing edges lying in a plane substantially radial to the head and substantially perpendicular to the face of the head, the side faces of teeth being arranged to taper downwardly towards the face of head at converging angles to the plane of shearing edge to provide a wedge-shaped tooth of substantially triangular cross-section in any radial plane passing thru the tooth, and the forward faces of said teeth being arranged to taper downwardly towards the face of said head at converging angles to the plane of shearing edge to provide a beveled shearing face for the tooth adapted to have a substantially uniform spacing with respect to teeth on said opposite face.

2,228,833. Bean Cleaner. John Lind, San Luis Obispo, Cal., assignor to Southern Pacific Milling Co., San Francisco. In bean cleaning apparatus, a horizontally disposed, circular, rotary table, means for rotating table about its central vertical axis, means for feeding beans or like material onto the central portion of table, means over table for separating undesirable foreign material and beans generally outwardly toward the outer edge of table along separate paths of travel with the paths of the beans alternating with the paths of the foreign material upon rotation of table, spaced means around table arranged and adapted to conduct the beans from each of the paths of travel thereof away from the outer edge of table, said table including a perforated screen of relatively coarse wire mesh adapted to pass foreign material therethru of substantially smaller size than the beans, the major portion of screen being suspended for free dropping of last mentioned foreign material therethru, and means spaced be-

low the screen for catching and guiding material that passes thru the screen to a point of discharge, said central portion being imperforate, and relatively smooth and screen being annular in shape and extending around central portion.

2,228,595. Measuring and Sacking Grain. Spencer E. Finch, Bailey, N. C. A grain measuring and sacking apparatus comprising a hopper having spaced compartments, a swingably mounted spout on the hopper for alternately filling the compartments, a leveler blade in the hopper adapted to level off the top of a filled compartment, valves controlling respective discharge openings in the bottom of the compartments, and means connected to the leveler blade and adapted to close the valve of an empty compartment and open the valve of a filled compartment.

2,223,894. Grain Conveyor and Loader. David Love, Loughheed, Alberta. A loader comprising a tubular upright, a frame including a lower part and an upper part pivotally connected together for movement about a horizontal axis, means for rotatably supporting the lower part of the frame from the upper end of the upright for movement about a vertical axis, a cradle passing through the frame and supported in the upper portion thereof, a conveyor housing slidably arranged in the cradle, conveying means passing through the housing and means for actuating the conveying means.

2,227,557. Conveyor. Alfred Delos Sinden, Aurora, Ill., assignor to Redler Conveyor Co., Quincy, Mass. In combination, a casing having an inlet and an outlet, a conveying element traversable thru the casing and provided with a plurality of spaced flights of open structure for effecting the conveyance of material thru the casing in a continuous stream and a sprocket over which said conveying element passes, said sprocket being provided with relatively wide flanges extending laterally from the teeth thereof and adapted to pass between adjacent flights of the conveying element for entirely dislodging material therefrom.

2,222,306. Recovery of Grain Solubles. Harry G. Atwood, Peoria, Ill. The method of processing grains in the manufacture of alcohol for bourbon and rye whiskies to effect a de-alcoholized distillery grain slop which can be rapidly and economically separated into liquid and solid portions for the recovery of valuable by-products, which consists of the following steps: fine grinding all grains, mixing the corn and rye grains in water to make a mash, mixing the malt grains in water and formaldehyde to make a sterile diastase solution, separating the malt grains from the diastase solution, adding the separated malt grains to the mash and slowly raising the temperature to 160° F. to pre-liquefy the mash by enzymatic action of the malt grains, pressure cooking the mash by raising the temperature to over 300° F. to completely geletinize the mixture and to kill bacteria, reducing the pressure and temperature of the cooked grain mash, adding the sterile diastase solution to convert the mash by enzymatic action, cooling and fermenting the mash, distilling the fermented material to leave a residue of de-alcoholized distillery grain slop, and rapidly filtering the whole slop in one pass to separate the material into distiller's grain cake

containing all residue solids and a filtrate having substantially no suspended fines and containing substantially all yeast and grain solubles, and then evaporating the filtrate to obtain a ribo-flavin material.

2,227,634. Conditioning Grain. David Dalin, Milwaukee, Wis. The combination of: two superimposed tanks; a controlled connection between the tanks thru which material to be treated may gravitate from the upper tank into the lower tank; means for evacuating the tanks while the material is in the upper tank and the lower tank is empty; means at the top of the lower tank for defining a treatment zone having a restricted outlet at its bottom; means for spreading the material into a thin layer as it gravitates from the upper tank down into the treatment zone; means for projecting steam onto the thin layer of material as it enters the treatment zone so that all portions of the material are subjected to a heat and moisture treatment and moisture is driven into the interstices of the material by the increase in pressure incident to the introduction of the steam into the evacuated treatment zone; and valve means for controlling the rate of discharge of the material from the treatment zone to coordinate the same with its rate of flow from the upper tank into the treatment zone so that the material is detained for a period of time in the treatment zone before entering the main part of the lower tank.

Washington News

A Department of Agriculture appropriation for 1942 fiscal year of \$1,013,905,493 has been requested by Pres. Roosevelt, and power to draw upon the treasury for an additional \$162,000,000 for supplementing parity payments to farmers. For benefit payments \$596,711,340 is allowed, for soil conservation payments \$498,921,220, for parity payments \$49,866,160, and for sugar control payments \$47,923,960. One item is \$200,000,000 for the removal of farm surpluses.

Soybean Oil Meal, Its Value and Uses

[Continued from page 65.]

levels of soybean oil meal in poultry rations are numerous.

Soybean oil meal is usually available in the price range of cottonseed meal and it ordinarily supplies a protein much cheaper per unit than meat scraps and fish meal. There doesn't seem to be any question about soybean oil meal being preferred over cottonseed meal for liberal use in poultry feeds and many experimenters are finding the quality of protein in a properly cooked soybean oil meal superior to meat scraps and about equal to the best grades of fish meal.

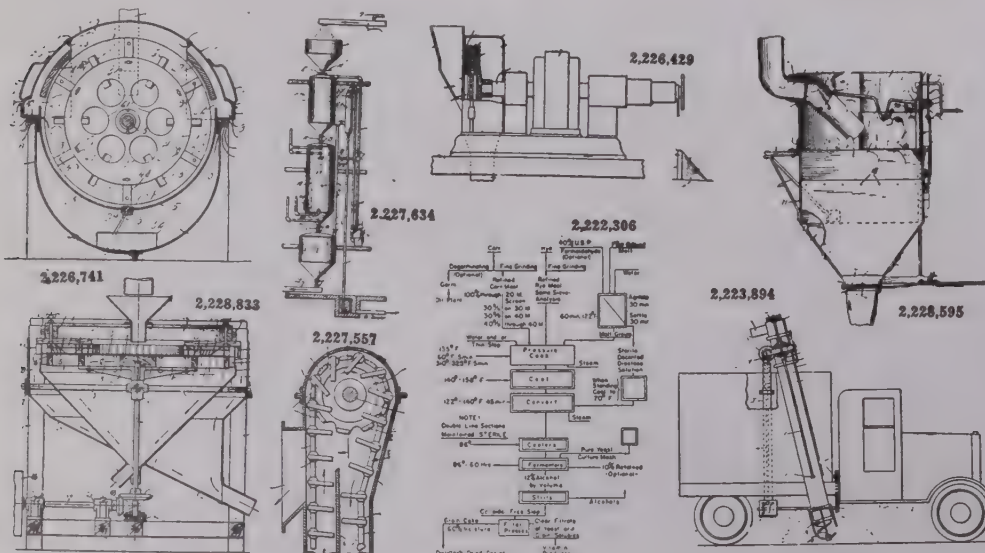
The mineral content, especially the phosphorus, of soybean oil meal makes it possible to maintain an optimum level and ratio of calcium and phosphorus in poultry rations. This promotes better bone formation and offers some protection against perosis. It is an easy matter to add calcium and phosphorus but you can't do much about an excess as is the case where liberal use is made of meat scraps or even fish meal.

Soybean oil meal is credited with an anti-perotic factor in the form of choline not found in appreciable amounts in other commonly used ingredients.

Soybean oil meal is also credited with having a definite stabilizing effect on the fat soluble vitamins in mixed feeds.

In view of its established merits and availability, I feel confident to predict that soybean oil meal will be used in the future in ever increasing amounts as a practical and profitable protein feed for livestock and poultry.

Use of CO₂ for smothering fires in stored grain is under consideration, but so far no kindly manufacturer of soda fountain or similar equipment has been found who will supply a drum of gas, hose for connecting the pipe and a control valve for experiment under farm conditions.—A.S.A.E. Com'te on Farm Fire Prevention.



Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

CALIFORNIA

Solyo Station (Vernalis p. o.), Cal.—H. C. Spencer reported his plant was damaged recently by high winds.

Visalia, Cal.—Fred Hunsucker has sold his business, operated as Hunsucker's Feed Service, to the Taylor Milling Corp., Los Angeles.

Los Angeles, Cal.—The California Hay, Grain & Feed Dealers Ass'n held a district meeting Dec. 30 at the Jonathan Club, Vice-President R. A. Mayer of the state ass'n in charge. L. M. Jeffers, chief, Bureau of Field Crops, spoke briefly.

San Francisco, Cal.—The San Francisco Grain Exchange and the California Hay, Grain & Feed Dealers Ass'n co-operated in a meeting held here Jan. 3. A. H. Hankerson, manager of the Grain Exchange, opened the meeting and introduced Walter K. Jansen, state ass'n president, who handled the program. L. M. Jeffers, chief, Bureau of Field Crops, spoke briefly. L. O. Bailey, sec'y Warehousemen's Ass'n, gave a short talk.

Sacramento, Cal.—The California Hay, Grain & Feed Dealers Ass'n in co-operation with the California Farm Bureau in an effort to bring farmer-growers; feed and seed dealers together with the state and county officials to study the pending seed and weed control program in the proposed new California Seed Law, has arranged a schedule of meetings as follows, with men in charge and thru whom reservations may be made: Bakersfield, Feb. 10, 7:30 p. m., L. O. Doyle, Glase Wattenberger, Louis E. Agnette; Tulare, Feb. 11, 7 p. m., Grover B. Hill, W. F. Frey, Geo. H. Cutter, Dewey Wells; Modesto, Feb. 12, 7:30 p. m., L. B. Gilbert, R. C. Jeannele, M. L. Benedict; Marysville, Feb. 13, R. O. Heikin, Chas. Pugsley, Walter K. Jansen; Corning, Feb. 14, 7:30 p. m., R. A. Harelson, H. K. Willard, John Bucke, Louis Sutton; Santa Cruz, Feb. 17, 7:30 p. m., C. A. Gardner, Geo. W. Hoffman, J. H. Hauschildt; San Jose, Feb. 18, G. S. Leedom, B. J. Perry; Hayward, Feb. 19, E. J. Wapelhost, E. G. Wente, J. Russell Smith; Petaluma, Feb. 20, 7:30 p. m., H. C. Hazlett, Ed H. Durr; San Francisco, Feb. 21, 2:30 p. m., E. R. Warren, Ralph Lowe; Sacramento, to be arranged.

CANADA

Fort William, Ont.—Senator Norman M. Paterson left here Jan. 13 for Winnipeg to confer with grain officials there concerning the erection of additional grain storage space at the lakehead.

Winnipeg, Man.—Daily trading limits on fluctuations in flax prices in Winnipeg are now 15c instead of 10c, according to an announcement by the grain exchange. The daily limits on other grains remain unchanged at 10c per bu. for wheat and rye and 6c for oats and barley.

Winnipeg, Man.—Officials of the N. Bawlf Grain Co., Ltd., have authorized distribution of the company's assets among the shareholders of the 6½% cumulative redeemable preferred shares to enable the company to surrender its charter. The terminal elevator and country elevators of the N. Bawlf Grain Co., Ltd., were purchased by the Alberta Pacific Grain Co., Ltd.

Toronto, Ont.—Eastern Canadian grain storage companies are having an exceptionally busy year as evidenced by the recent report of Goderich Elvtr. & Transfer Co., Ltd., representative of terminal companies operating east of the lakes. G. L. Parsons, president, stated in his letter to shareholders that the year was second best in 42. However, he stated also, that since two-thirds of the grains handled is being shipped for export, on which the elevator allowance is only half that for domestic services, the earnings are not as great as might be expected. Ware and excess profits tax also are taking heavy toll of cash returns. The total volume of grain handled by this company in the year under review was 18,000,000 bus.

Ottawa, Ont.—Provincial ministers of agriculture conferred with Hon. J. G. Gardiner, federal agriculture minister, Jan. 13 on feed grain supplies. Mr. Gardiner called the meeting to discuss reports of a shortage of feed grain in certain areas. The suggestion of a subsidy or some form of assistance towards moving of western feed grains into eastern Canada was discussed.

Fort William, Ont.—It is understood that C. D. Howe Co., Ltd., is drawing preliminary sketches of proposed distress buildings, to be erected here this spring and summer adjacent to present elevator storage. Consideration is being given the matter in grain circles—co-operating with the federal government. Such storage, it is reported, would be of a temporary character, probably large frame sheds. It has been suggested that sufficient distress storage to accommodate between 90,000,000 and 95,000,000 bus. of grain be erected at the head of the lakes, which would double the present capacity of the lakehead cities as a grain storage center.

COLORADO

Louisville, Colo.—Fred Purviance, formerly manager of the Frederick (Colo.) Elevator, is in charge of the local elevator.

Frederick, Colo.—H. L. Ballinger has succeeded Fred Purviance as manager of the Frederick Elevator.

Fort Collins, Colo.—A school for the dissemination of information regarding nutrition in the feeding of poultry and livestock was presented at a school for feed manufacturers and distributors held on the campus of the Colorado State College recently. More than fifty men, representing the feed industry in all sections of the state, attended. The selection of feed ingredients on the basis of quality was stressed during the two day sessions.

ILLINOIS

Roberts, Ill.—Leo Zick has resigned as elevator man for Roberts Co-op. Grain Co.

Flat Rock, Ill.—Fire of undetermined origin destroyed the feed store and hatchery of Smith & Short late the night of Jan. 8.

Chatham, Ill.—The Chatham Elvtr. Co. reported its plant had been damaged by high winds recently. The loss was small.

Grant Park, Ill.—Harry Cole has returned to his work as manager of the Grant Park Co-operative elevator following a long spell of sickness.

Bushnell, Ill.—Mayor George Porter has purchased the Bushnell Grain & Feed Co. elevator. He is manager of the Bushnell Co-op. Co., and will continue in that position.

Glasford, Ill.—We are very well pleased with the past year's business, it being the best since we have been in the business, which is about 20 years.—Glasford Grain & Milling Co.

Lacon, Ill.—The Terminal Grain Co. is installing a new Kewanee Truck Dump and larger dump grate, and revamping the spouting. Eikenberry Construction Co. is doing the work.

Berwyn, Ill.—Western Feed & Supply Co. has been incorporated; 1,000 shares, common p.v. at \$10 share; incorporators, W. J. Bergue, C. A. Bergue, E. L. Cross; to deal in hay, grain and straw.

Onarga, Ill.—The grain dealers of this section will meet here Jan. 23 to listen to an address by State Entomologist W. P. Flint on the meal moth now infesting stored corn. Curt Stout of Gilman is arranging the meeting.

Saunemin, Ill.—Elizabeth G. Carson, wife of Geo. J. Carson, manager of the Saunemin Elvtr. Co., died on Jan. 3. The funeral services were held Jan. 6 at St. Mary's Church at Loretto, Ill. Interment was at St. Mary's Cemetery. The husband, five sons and one daughter survive.

Woodhull, Ill.—George Bloomberg was rehired as manager of the Woodhull Grain Elvtr. Co. elevator for the coming year. The company will enjoy its annual dinner on Feb. 8 on which occasion dividend checks will be distributed.

East St. Louis, Ill.—Paul H. Smith has been appointed sales and advertising manager for Alfocorn Milling Co. He has had a wide experience in the feed business as a salesman, merchandising specialist and sales manager. He formerly was with Vitamax Mills, which is being liquidated.

Champaign, Ill.—Swift & Co. have recently added twelve reinforced concrete storage tanks to their bean storage elevator, each tank being 24 ft. inside diameter together with the interstice bins, giving additional storage room for 509,000 bus. The annex was designed and erected by the James Stewart Corp.

Springfield, Ill.—The 16th census of the U. S. A. shows 213,439 farms to be under cultivation in Illinois. Of this number 87,004 were operated by full owners against 85,069 recorded by the census of 1930. Part owners operated 32,826 farms in 1940 against 34,823 in 1930. The number of farms operated by tenants was 91,982 against 92,482 in 1930, which reflects less trouble for grain dealers who occasionally buy grain covered by a landlord's lien.

Peoria, Ill.—Wm. F. Stoltzman was elected president of the Peoria Board of Trade at the annual election held Jan. 13. Guy F. Luke was elected first vice-pres., and B. E. Wrigley second vice-pres. J. Leo White was re-elected sec'y and Wm. M. McKenzie treasurer. Directors chosen were F. L. Barlow, H. M. Barlow, C. P. Cummings, H. H. Dewey, R. F. Mueller, H. A. Mulholland, E. W. Sands, J. F. Sheridan, Jacob Younge, and H. J. Zastrow.

El Paso, Ill.—The El Paso Elvtr. Co. office was burglarized early in the morning of Jan. 1, the thief escaping with approximately \$100. A number of remittance checks in the vault were untouched. A candy and gum vending machine was stripped. New Year's Eve revelers, returning home about 3:30 a. m., saw a man in the lighted elevator office, but assumed he was working on company books for end-of-the-year invoices. The office and vault doors were pried open with a spike bar stolen from the T. P. & W. tool house.

Modesto, Ill.—The Palmyra-Modesto Grain Co. elevator and 7,000 bus. of stored shelled corn were burned in fire that destroyed the structure the evening of Jan. 6 at a loss of several thousand dollars. Thru efforts of the fire department 25,000 bus. of government-sealed corn stored in near by bins and 10,000 gals. of gasoline in three tanks were saved. The elevator office, a separate building, was not damaged. The disaster marked the third elevator to be destroyed by fire on the same site. Cause of the blaze was not determined. Lyndell Henry was manager of the elevator. The loss has been appraised at \$4,000 on building and \$4,500 on contents.

CHICAGO NOTES

Changes in the rule on business conduct com'ite will be voted on Jan. 30 by members of the Board of Trade.

Karl H. Rehnberg has been re-elected manager of the Clearing House Ass'n of the Chicago Board of Trade.

An amendment to Rule 291 of the Board of Trade has been posted for ballot Jan. 30 to make the minimum quantity of oats delivered out of one warehouse 2,000 bus.

Philip R. O'Brien, newly inducted president of the Board of Trade, announced the exchange's receipts during the year exceeded expenditures by \$2,280. In 1939 the board had a deficit of \$57,479 after adjustments.

Barnett Faroll of Faroll Bros., a well known member of the Board of Trade, has been elected chairman of the Gratuity Fund of the Exchange, succeeding the late James Begg, who held that office for many years.

I. S. Riggs, formerly branch manager for Quaker Oats Co. at Richmond, Va., has been transferred to Chicago as sales manager of the eastern division.

Membership certificates in the Board of Trade were transferred at \$600 early this month, representing an increase of \$150 from the recent low point. Posted offers of membership certificates were at \$625 and the highest bid \$550.

Albert Schwill & Co. have recently increased their reinforced concrete storage by adding nine reinforced concrete cylindrical tanks 24 ft. 3 in. inside diameter arranged in three rows of three tanks each, and interstice spaces giving additional storage room for 422,000 bus. The annex was designed and built by the James Stewart Corp.

The Ass'n of Grain Commission Merchants will hold its annual meeting and dinner on Jan. 23. Dr. George Irving Christie, president of the Ontario Agricultural College, Canada, and the former assistant sec'y of the U. S. Department of Agriculture, will speak on the subject, "The Grain Trade and National Defense." Alfred W. Mansfield is president of the ass'n.

Philip Ray O'Brien was elected president of the Chicago Board of Trade Jan. 13 without opposition. Peter B. Carey was chosen first vice-pres., Harvey S. Austrian, second vice-pres., the latter without opposition. Directors named were T. C. Rodman, Robert Burrows, L. D. Godfrey, C. S. Gordon and Earle M. Combs, Jr. R. H. Gardner was elected for a term of one year. George E. Booth and L. J. Ryan were elected members of the nominating committee.

Another successful "Ladies' Night" Dinner-Dance was held by the Chicago Chapter of the Superintendents' Society, Jan. 16. Despite the icy pavements and the miserable weather, about sixty Supers, their wives and assistants, gathered at their favorite spot—right next door to the Arcady Farms Milling Co.'s plant in Riverdale. Following a pleasant "get-acquainted" social hour the gathering formed one continuous line around the immense banquet hall of the Redwoods Inn, one end doubling back so that everyone shook hands with everyone else present. Following a delicious chicken dinner Chapter Pres. Chester J. Alger of Corn Products Refining Company, called on past and present national and local officers, directors and committee chairmen, who in turn told of the work being undertaken. All stood in silence as a memorial resolution to the late Barney Weller was read, following which it was signed by everyone present. During the course of the evening entertainment, community singing, and other novel stunts were alternated and the hours flitted by in such a hurry that no one was ready to leave. Much lumbago was reported the next day.

INDIANA

Waterloo, Ind.—Pliny Gratz, owner of Waterloo Mills, has installed a 30-h.p. diesel engine as an auxiliary power.—A. E. L.

Saint Joe, Ind.—A new feed mill will be opened here by the Gerig & Sons Hatchery whose main office is at Hicksville, O.—A. E. L.

Newark (Solsberry p. o.), Ind.—Lafayette Watkins, 70, for 19 years operator of a feed store here, took his life Dec. 22 because of ill health.

Huntington, Ind.—The Huntington County Farm Bureau has built an addition to its plant, size 30x40 ft., used for display and sales room.—A. E. L.

Linn Grove, Ind.—The Berne Equity Exchange has replaced its attrition mill with a 50-h.p. hammer mill, and complete standard power wiring.—A. E. L.

Mt. Vernon, Ind.—E. W. Howard recently resigned his position as traffic manager for the Mt. Vernon Milling Co., which he held for the last 15 years.

Treaty (Wabash R. F. D.), Ind.—The Wabash County Farm Bureau elevator has been equipped with a new revolving corn cleaner and an aluminum paint.—A. E. L.

Ft. Wayne, Ind.—Sales representatives of the McMillen Feed Mills, Inc., from seven states thruout the midwest attended the 6th annual general sales conference held here Jan. 6 and 7. Dr. Leo Norris of Cornell University was the principal speaker. A banquet was enjoyed Monday evening at the Hotel Anthony when Dusty Miller, Wilmington, O., entertained the guests.

Bainbridge, Ind.—Otto Lefforge has taken possession of the elevator he recently purchased from the Miller Grain Co., and is operating it as the Bainbridge Grain & Feed Co.

South Whitley, Ind.—New electrically operated rolling doors have been installed at three convenient positions in the Farmers Elvtr. Co. driveway. Walter Penrod is manager of the elevator.

Marion, Ind.—The annual meeting of the Farmers Grain Dealers Ass'n of Indiana will be held here at the Spencer Hotel on Feb. 26 and 27. Frank Pyle, president of the ass'n, has issued a cordial invitation to members of the Indiana Grain Dealers Ass'n to attend the sessions.

Indianapolis, Ind.—H. B. 14 is an income tax bill approved by the Indiana Grain Dealers Ass'n and deserving of the prompt support by merchants contacting their members of the state legislature. It reduces the tax rate from 1 per cent to ½ of one per cent on receipts from "retail," without reducing materially the income the state is now deriving from this source. Grain dealers are urged to write their representatives to give this bill favorable consideration.

Crawfordsville, Ind.—John L. Cruea, former manager of the local elevator of the Montgomery County Farm Buro Co-op. Ass'n, recently resigned to become manager of the White County Farm Buro Co-op. Ass'n. He has been succeeded by Harold Peacock. Noble C. Logan, who has been manager of the Farm Buro Oil Ass'n, operated by the Montgomery County Farm Buro Ass'n, now becomes general manager of the company's combined enterprises. Mr. Peacock and Nelson A. Bayless, manager of the company's elevator at Browns Valley, being designated as assistant managers, as is also John K. Patton, now manager of the oil business.

IOWA

Woden, Ia.—Dan Critz has taken over the management of the local Critz & Co. elevator.

Winfield, Ia.—The Farmers Elvtr. Co. is considering building a new office building at the local elevator.

Rowan, Ia.—The Rowan Grain & Elvtr. Co. elevator was entered by thieves recently. Nothing of value was taken.

Hanna (LuVerne p. o.), Ia.—George Frantz, manager of the local Kunz Grain Co. elevator for 25 years, has resigned.

Alexander, Ia.—The Schulte Grain Co.'s elevator was broken into by thieves recently and a small amount of loot taken.

Clarinda, Ia.—The Farmers Implement Co. has been incorporated, to deal in grain as well as various other commodities.

Grant, Ia.—Frank DeWeiss, 63, miller, died at his home Jan. 8. Mr. DeWeiss was owner and operator of a mill run by water.

Ellsworth, Ia.—R. Wayne Doolittle of Webster City has succeeded Roland Baumann as manager of the Farmers Co-op. elevator.

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The
DEPENDABLE
GRAIN FUMIGANT

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Odebolt, Ia.—Carl Wieborg of Harlan is building a feed plant here, to be modernly equipped for grinding and mixing all kinds of feeds.

Lake Park, Ia.—Arnold Bros. recently let a contract to the T. E. Ibberson Co. to cover its elevator, driveway and office structures with iron.

Sioux City, Ia.—The Flanley Grain Co. won a \$36,964 contract to supply a war department quartermaster corps order for corn, for delivery Mar. 1.

Davenport, Ia.—The new 500,000-bu. elevator built for the Western Flour Mills has been completed. Modern facilities have been installed for the handling of grain.

Ringsted, Ia.—New approaches are being built to the south elevator of the Co-op. Grain & Produce Co., and the roof over the grain dump is being extended on the north side.

Boone, Ia.—The Farmers Elevator has installed a large size Blue Streak Corn Cutter and Cracker, also a new loading spout for the main elevator. Geo. Todd Constr. Co. did the work.

Ventura, Ia.—The Farmers Elvtr. Co. recently installed new Strong-Scott Head Drives, belt, buckets and made other improvements at its plant. The T. E. Ibberson Co. did the work.

Badger, Ia.—The Farmers Elvtr. Co. is painting the inside of its office a pleasing light color and plans trimming the lower part and trim a different shade. Glen Pogeler is the manager.—A. G. T.

Elliott, Ia.—R. C. Kipp and D. R. Kipp have joined forces and will have their office at the elevator, operating under the name of Kipp Bros. The firm will continue in the grain, feed, seed, coal, etc., business.

Kennedy (Adel p. o.), Ia.—J. L. Tut of Minneapolis is manager of the Kennedy Station Elevator. For five years Mr. Tut was in the grain business at Menlo prior to being employed as a salesman, his recent position.

Joice, Ia.—The Joice Grain & Coal Co. sponsored an evening's entertainment at the local school recently. A large group of farmers attended. Colored slides were shown and a speaker gave the history of hybrid corn.

Portsmouth, Ia.—Efforts are being made in surrounding communities to furnish this community with grain and other assistance, sorely needed following the devastation wrought here by the windstorm that leveled everything last November.

Ashton, Ia.—The Farmers Elevator was damaged by a fire originating in a defective chimney in the elevator office the night of Dec. 12. A passerby discovered the blaze before it had gained much headway, and firemen summoned quickly extinguished it.

Curlaw, Ia.—The general office of Critz & Co., operators of a line of country elevators, has been moved here from Fort Dodge. Mrs. O. V. Critz, who is owner and manager since the death of her husband more than a year ago, will reside in Emmetsburg.

Des Moines, Ia.—The new reinforced concrete storage annex built here for Swift & Co. by the James Stewart Corp. has eight tanks arranged in two rows of four tanks contacted, each tank being 24 ft. inside diameter, giving a total additional storage for 256,000 bus.

Ewart (Montezuma p. o.), Ia.—C. L. Johnson is manager and owner of the Wells-Hamilton Grain Co., having purchased the elevator and business from M. E. Wells and A. A. Hamilton Aug. 1, 1940. He is continuing to operate as the Wells-Hamilton Grain Co.

Mayesville (Walcott p. o.), Ia.—An attempt to crack the safe at the office of the Dixon Elvtr. by sawing off the hinges the night of Jan. 12 was unsuccessful. The thieves had to be content with a few pennies scooped from the cash drawer. Entrance to the office was gained by prying open a rear door.

Massena, Ia.—The Farmers Elvtr. Co. has made the following changes and improvements on its elevator: New Atlas 5-ply elevator belt and Calumet Cups, new distributor and all steel grain spouts, head drives and a motor with V-belt drive for the air compressor. Geo. Todd Construction Co. had the contract.

Greenfield, Ia.—J. E. Foster, manager of the Farmers Elvtr. Co. for the past 17 years, recently purchased the local Gamble Store and will take possession some time in January. Audra Elliott will succeed Foster as manager of the elevator.—Art Torkelson, with Lamson Bros. & Co.

Des Moines, Ia.—The storage tanks recently constructed for the Spener Kellogg & Sons Co. by the James Stewart Corp. were built in two rows, seven in each row, each tank being 22 ft. inside diameter and these are spread apart to provide for interstice and pocket bins. The total storage capacity of the new unit is 527,000 bus.

Des Moines, Ia.—Have you contacted your senator or representative? If not, do so at once so he will be prepared to act on the new improved itinerant merchants bill, the proposed Iowa seed law, and the unfair sales law. Let him know you are interested. These three bills affect you and your business directly.—Harold E. Theile, sec'y.

Idagrove, Ia.—Grainmen and millers from Omaha and other points, farmers with their families and townspeople were dinner guests of C. C. Crawford, local elevator operator, the evening of Jan. 1. It was estimated 1,000 persons were served without delay or confusion, and entertained by an excellent floor show. Dancing was enjoyed later in the evening.

Galt, Ia.—The Galt Co-op. Grain Co. and the Burt Grain Co. elevators were broken into the night of Jan. 9, entrance gained in each case by prying the door open. The safe door at the Farmers elevator was chiseled off and \$5 in change taken. This is the same safe that was carried out of the building and blown open about two years ago. The safe at the Burt elevator was unlocked and contained nothing of value.

Missouri Valley, Ia.—Verlin Kelley, a trucker from Kearney, Neb., recently presented the Loveland Elvtr. Co. with a "hot" check for \$126.50 in payment of a truckload of corn. The trucker was caught up with and the judge, in turn, presented him with a seven-year sentence at Fort Madison. Let us once more impress upon grain dealers the importance of being on guard when doing business with itinerant truckers.—Harold E. Theile, sec'y, Western Grain and Feed Ass'n.

Adair, Ia.—The Adair Feed Mill celebrated completion of an extensive remodeling program with a formal opening Jan. 4. Free lunch was served and entertainment provided the many visitors who attended. Door prizes were awarded and several vouchers for free custom work at the mill were distributed. The mill now is prepared to do custom grinding, hulling and mixing and will carry a complete line of concentrates and mill feeds. J. O. Richardson is manager of the plant.

Dike, Ia.—In the first six months of our fiscal year which ended Dec. 31, we note our total gross sales are \$68,069.12. An increase in these six months over last year's complete 12 months of \$1,306.32, last year's total sales being \$66,762.80. In October, November and December of 1940 there was an increase of about 175% over sales in the same months in 1939. More grain, feed and merchandise are responsible for this increase in sales. Also we feel the addition of a truck has benefited to quite an extent.—Clifford Gregory, mgr., Farmers Co-op. Co.

Des Moines, Ia.—The Inland Milling Co. and the Beaver Valley Milling Co., both local firms, have consolidated under the name of the Inland Mills, Inc. The personnel of the organizations will be retained. Clarence S. Chase is general manager. To accommodate the increased volume of commercial feed and self-rising pancake flour departments, it was decided to eliminate the flour milling equipment at the Beaver mill and use the space for improved corn milling equipment and feed mixing machinery. Plans are being made for the installation of larger and improved equipment to this end. The two mills have an elevator storage space of more than a million bushels.

Plainfield, Ia.—An elevator and mill covering 64x100 ft. and owned by J. Roach Sons, Inc., burned here Jan. 10, with an estimated loss of \$35,000. Destroyed in the fire were 20,000 bus. of grain, mostly soybeans and the balance corn and oats, and about seven carloads of purchased and home milled feeds. A mill addition was built two years ago at a cost of \$10,000. Main portion of the elevator was built in 1916, the rest being 60 years old. E. A. Roach is senior partner and James and Howard Roach, associates. Firemen from Nashua, Waverly, and Plainfield prevented the fire from spreading to the company's office building nearby. The fire was of unknown origin.—Art Torkelson.

Fairfield, Ia.—No insurance was held on the grain elevator and feed store in the Burlington freight yards which was destroyed by fire, Jan. 4. The elevator was owned by Sanford Zeigler and managed by Milo Hamilton, who also managed the feed store. The loss included 12,000 bus. of government sealed corn.—L. A. G.—The business was known as the Q Mill.

Cornelia (Clarion p. o.), Ia.—Fire destroyed the grain elevator owned by Dale Peterson on Jan. 15, leaving building, grain and stock in the office a total loss. Icy roads prevented firemen reaching the scene in time to check the blaze. The fire started from an overheated stove in the office, spreading so rapidly Mr. Peterson had no opportunity to save his records. There was partial insurance.

Downey, Ia.—Work has just been completed by the Geo. Todd Constr. Co. on the elevator belonging to the Wilder Grain Co. which consisted of wrecking two old storages and remodeling the old elevator into a modern elevator and storage. There are sixteen bins and a work floor 24x60 ft. underneath the bins. The building has been iron clad. A screw conveyor receives and delivers the grain to the main elevator. Both conveyors have a direct drive.

Polk City, Ia.—The big grain elevator recently purchased by the Polk City Grain Co. from the Wheeler Bridge & Lumber Supply Co., known locally as the old Sloan Lumber & Grain Co., is being remodeled and repaired. Possession of the elevator was given Dec. 23. Its machinery has been put in first class running order by the new owner and the building itself given a thoro inspection. The lumber building will be used to house the company's trucks and feed supplies, the lumber formerly stored there having been purchased and removed by F. O. Wilson. This recent purchase increased local storage capacity of the Polk City Grain Co. to about 24,000 bus. The company also has an elevator at Herrold. Virgil Swim will continue in charge of the company's local elevators.

Percival, Ia.—An incendiary fire threatened the A. B. Wilson Grain Co. elevator the night of Jan. 6. A passerby discovered the blaze, called help, and the flames were extinguished before serious damage resulted. The sheriff's office was notified when evidences of arson were discovered. The blaze was discovered in the dust house on the north side of the elevator where chaff from the grain is blown. It was reported kerosene had been thrown up the side of the wall and over the chaff. The chaff, however, appeared to be damp and the fire not having gained much headway, was smothered out when chaff was thrown over the flames. The elevator contains over 10,000 bus. of government stored corn. Federal authorities are making an investigation of the fire.

KANSAS

Latham, Kan.—The Ellis Grain Elevator was destroyed by fire on Jan. 9. The building and contents were reported a total loss.

Salina, Kan.—W. O. Lyter, who retired several years ago as president of the Shellabarger Mill & Elvtr. Co., died Dec. 31 in a Kansas City hospital.

Fowler, Kan.—The A. R. Upp Grain Co. and the George E. Gano Grain Corp., have consolidated and are being operated by Mr. Gano with A. R. Upp as manager.

Herington, Kan.—Burglars who broke into the office of the Farmers Elevator in December, carried away a typewriter, a radio, two automobile tires, a grease gun and a gum vending machine.

Lyons, Kan.—C. W. Cherpitel, 65, was killed Jan. 7, when a truck in which he was hauling wheat to an elevator rolled backward from the elevator dump and crushed him between the corner of the truck and a door on the building.

Cawker City, Kan.—Bailey & Lynch opened their new feed grinding department Dec. 23 and now are serving their customers with all kinds of chicken, hog and cattle feeds. A new building has been completed which houses the hammer mill and affords space for feed and seed storage.

Dodge City, Kan.—The Dodge City Co-operative Exchange plans to construct a 250,000-bu. elevator, to be located just north of its present building. The building plans have been drawn and are in hands of contractors for bids on the construction contract. The new plant is to be constructed so that more units may be added later, eventually to give it a half million capacity. The present building will be used exclusively for the company's feed business when the new structure is completed. Under present plans, construction will start early this year.

Dodge City, Kan.—The Kansas Grain, Feed & Seed Dealers Ass'n has voted not to concur with other interests in asking for legislation authorizing the Kansas State Grain Inspection and Weighing Dept. to establish milling and baking laboratories, believing that it would eventually result in technical points being added to grading standards for which country dealers would have no means of determining such factors at points of delivery, and believing further that a program designed to eliminate undesirable varieties of grain should start with the producer and not at terminal markets. The board also opposed proposed changes in the federal grading standards for rye and oats.

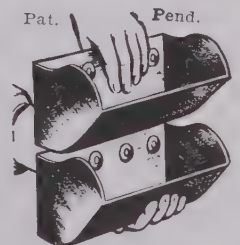
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- 1 Scoops in the grain with "cushioned" action.
- 2 Carries maximum loads.
- 3 Permits close spacing, avoiding pick-up impacts.
- 4 Less damage to grain.
- 5 Smooth-flowing pulsations reduce wear on equipment.
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McPherson, Kan.—The Feedola Milling Co. has purchased the grain and coal business of the Miller Grain Co., and will operate as the Feedola Milling Co. Lee Miller is still interested in two elevators at Mitchell, but will devote most of his time to the San-Ore Construction Co., a firm with which he has been associated for several years.

Topeka, Kan.—The proposed grain taxing law which provides for one-half mill (50c per thousand bushels) tax on the handling of grain, will be important to producers and dealers. You should encourage your farmer customers to ask their legislators to support this measure. Producers are now worrying about the tax they may be required to pay on their grain as of the first of March, which is covered by a CCC loan. The present ad valorem rate will be from \$20.00 to \$25.00 per thousand bushels. Under this proposed law, they would pay a tax of only 50c per thousand bushels on the total produced, then they would pay no further tax on that grain regardless of where it was stored; even if they keep it on their farms for one year or more.—J. F. Moyer, sec'y Kansas Grain, Feed & Seed Dealers Ass'n, Dodge City.

KENTUCKY

Stanford, Ky.—The Baughman Milling Co. reports a recent electrical damage loss to a motor.

Taylorville, Ky.—The Crescent Roller Mills Co., Inc., recently sustained a small amount of property damage from high winds.

Bowling Green, Ky.—O. W. Robinson, owner of the Wolcott Flour Mills, Lexington, Ky., has taken over the Bowling Green Milling Co., and is operating it. One of the elevators, practically destroyed by fire Christmas eve is being repaired. This is the sixth mill that Mr. Robinson is operating.

LOUISIANA

New Orleans, La.—Bewley Mills has combined its local warehouse and office on Julia St.

New Orleans, La.—John B. Sanford, for 18 years superintendent of the Public Grain Elevator, has severed his connection there and opened his own office to handle grain moving thru the Crescent City port. Mr. Sanford, with his many years of experience in handling export grain, is thoroly equipped to serve the grain exporters. His wide acquaintance thruout the trade bespeaks for him the patronage of a host of friends.

MICHIGAN

Munith, Mich.—The property of Richard H. Reno was slightly damaged recently by a customer's truck.

Tawas City, Mich.—The Consolidated Grain Corp. of Bay City has leased the new James H. Leslie elevator.

Rosebush, Mich.—The Rosebush Elevator, operated by L. H. Moon, was damaged by high winds recently.

Corunna, Mich.—The Albert Todd Co. sustained a small loss at its plant, the result of recent high winds.

Fairgrove, Mich.—The Farmers Elvtr. Co. recently sustained a small amount of damage from high winds.

Onsted, Mich.—Branch's Mill has installed a new hammer mill, which is doubling the grinding capacity of the mill.

Lansing, Mich.—National bean week is being celebrated this week, beginning Jan. 16 and continuing thru Jan. 23.

St. Louis, Mich.—A customer's truck recently was responsible for a small damage to the elevator of O'Melia-Horgan.

Snover, Mich.—The Snover Co-op. Elvtr. Co. reported a small loss sustained at its plant recently, the result of high winds.

Coats Grove (Hastings p. o.), Mich.—The Smith Bros., Velte & Co. is discontinuing its elevator business here, due mainly to the discontinuance of the C. K. & S. railroad. Farmers of the vicinity will be served by truck from the elevators at Hastings and Woodland.

Ann Arbor, Mich.—Formal opening of the new Washtenaw Farm Buro store and grain elevator on North Fifth Ave., was held Jan. 14. Charles McCalla is proprietor of the business. The 10 storage bins provided have a capacity of approximately 10,000 bus. of grain. The new structure includes office quarters, warehouse, feed mill and storage elevator. New, modern loading and unloading facilities have been installed along with new feed milling equipment.

MINNESOTA

Rothsay, Minn.—The Melvin Ouse elevator will be iron clad, contract for the work having been awarded the J. H. Fisch Co.

Jackson, Minn.—The Farmers Elvtr. Co. has awarded contract to the J. H. Fisch Co. to construct a 32x48 ft. seed building.

Breckenridge, Minn.—F. E. Shepard has purchased the interest of A. B. Peterson in the Breckenridge Grain & Seed Co.

Garvin, Minn.—The Garvin Co-op. Elvtr. Co. will have its new seed cleaning plant completed and ready for operation by Feb. 1.

Imogene, Minn.—The J. J. Garry Elevator has installed a new 30-ft. 30-ton Fairbanks Scale with a steel frame. The T. E. Ibberson Co. did the work.

Darwin, Minn.—Fire destroyed the Darwin Farmers elevator early this month, with a loss estimated at about \$40,000. The elevator will be rebuilt.

Kiester, Minn.—The new addition to the Kiestler Co-operative elevator housing a feed grinding mill, feed mixer and other equipment, was opened Dec. 28.

Duluth, Minn.—The U. S. engineer's report for traffic thru the Soo canal for 1940 reported 224,182,345 bus. of wheat, 62,630,802 bus. other grain and 6,905,920 bbls. of flour.—F. G. C.

Dover, Minn.—Cornelius W. Gleason, 68, died suddenly at his home here Jan. 5 of a heart ailment. He was associated with Cargill, Inc., for many years, having retired five years ago.

Duluth, Minn.—The annual meeting of the Duluth Grain Commission Merchants Ass'n will be held Jan. 28, at which time election of five directors to serve for the year will take place.—F. G. C.

Minneapolis, Minn.—Five floors of the former Ceresota Flour Mills, now the Harbor elevator building, collapsed Jan. 7, dumping more than 50,000 bus. of corn into the basement. Milford Lytle is owner.

Fairfax, Minn.—Extensive repairs and alterations were made at the Eagle Roller Mill Co. elevator recently in addition to the old building being covered with galvanized iron. The T. E. Ibberson Co. had the contract.

St. Charles, Minn.—The Commander Elvtr. Co. has a crew of men clearing up the debris of the recent fire. A temporary mill will be in operation soon in the feed warehouse and a new feed mill is being installed.

Duluth, Minn.—Screenings are in active demand for feeding purposes and a good demand also has sprung up lately for wheat and coarse grains. Elevators are loading out supplies at the rate of about 100 cars daily.—F. G. C.

Duluth, Minn.—The Duluth Board of Trade Clearing House at its annual election Jan. 7 re-elected O. E. Martin as president for the fifth consecutive term. W. R. McCarthy was elected vice-pres.; G. W. Foster, sec'y-manager; and S. W. Paine assistant manager. Mr. Martin and Mr. McCarthy were named to the board of directors also. Holdover directors are W. H. Wilson, F. B. Mitchell, George Barnum, Jr., S. H. Newell, G. H. Spencer.

Minneapolis, Minn.—The Minneapolis chapter of the Society of Grain Elvtr. Supts. will hold its annual dinner dance at Freddie's Cafe the evening of Feb. 1. Numerous door prizes will be given to ladies present and an excellent program of entertainment has been planned for the occasion.

Ivanhoe, Minn.—Ed Ertz, a customer of the Farmers Elevator, sustained six broken ribs, a broken leg and other bruises, when he was pinned against a closed warehouse door by his truck. After loading the truck with coal, Mr. Ertz hand-cranked it to start the motor. It had been left in gear.

Duluth, Minn.—Ely Salyards was slated for re-election as president of the Duluth Board of Trade at the election held Jan. 21. The nominating com'te had submitted in addition the following slate for offices to be filled: George Barnum, vice-pres.; directors to serve three years, three to be elected, O. E. Martin, R. S. Owens, H. B. Stoker, F. C. Tenney, H. W. Wilson.

MISSOURI

Barnett, Mo.—The Barnett Elevator building has been leased to Norris Waite of Eldon and re-opened for business Jan. 4.

Green City, Mo.—Ralph Cochran recently resigned as manager of the Farmers Co-op. Shipping Ass'n and has been succeeded by George L. Sparks.

Gallatin, Mo.—The Robert Owings Mill & Produce Co.'s new building is practically completed. The structure has drive-in entrances at the north and south sides.

Sikeston, Mo.—The Scott County Milling Co. expects to have its new \$100,000 grain elevator, now under construction, ready for operation within the next thirty days.

Canton, Mo.—Cecil Bland has been named manager of the Canton Co-operative Elvtr. Co. elevator, succeeding Jack Marks. He entered on his new duties Jan. 1.—P. J. P.

Edina, Mo.—L. C. Hull, 87, died recently after a brief illness. In 1900 he was engaged in the grain and farm machinery business with T. F. Early under the name of Early & Hull, turning over his interests in the firm to his son, C. E. Hull, in 1912.—P. J. P.

St. Louis, Mo.—The entire slate of nominees headed by Julius Mayer was elected without opposition Jan. 8 by the Merchants Exchange. W. H. Toberman was elected first vice-pres.; C. H. Williamson, second vice-pres. Bert Collins, retiring president, automatically became a director. The Exchange, in a preliminary report, shows a net operating loss of \$14,000 for 1940 and a reduction of \$7,500 in invested surplus, which brot the total at the year-end down to \$95,000.

Richmond, Mo.—The Hardin Grain Co. has been made defendant in a suit for \$5,000, filed by Jess Hardin, who seeks compensation for annoyance from the operation of the grain company's corn shelling machine. The plaintiff complains that his yard is littered with partly burned corn husks and debris from a brick furnace used by the grain company to burn the shucks; that sparks from the burning refuse endangers near by property; and loud, constant and unusual noises annoy him.—P. J. P.

Mexico, Mo.—The W. W. Pollock Milling & Elvtr. Co. will continue plans for gradually enlarging operation of the plant. Stockholders of the company made this decision recently following the re-election of W. W. Pollock as a director and president of the firm. Two other directors elected at the meeting were Mrs. W. W. Pollock and Mrs. Miriam Hays. Mrs. Pollock will be the vice-president of the mill, Mrs. Hays, sec'y-treasurer. Roy Caldwell of Columbia has been named manager of the business, succeeding J. E. Curry, who will remain as assistant manager of the mill. Mr. Curry was temporary manager following the court order vacating receivership into which the mill was thrown on Nov. 23.—P. J. P.

STRATTON GRAIN CO.

MILWAUKEE, WIS. CHICAGO, ILL. SPRINGFIELD, O. ST. JOSEPH, MO. NEW YORK, N. Y.
MILL FEEDS — FEED PRODUCTS — BY-PRODUCTS
Consignments and Future Orders Solicited

Official Brown-Duvel
MOISTURE TESTERS
TagHeppenstall Moisture Meters
and a complete line of grain and seed testing equipment. Every item guaranteed up to government specifications.
HARRY B. OLSON 211 W. Wacker Drive
CHICAGO, ILL.

Grandview, Mo.—The office of the Grandview branch of the May Way Mills has moved to other quarters just west of the Frisco tracks.

KANSAS CITY LETTER

Eugene P. Mitchell, sales manager of the Larabee Flour Mills Co., is the new president of the \$3,000,000 reorganized Flour Mills of America, Inc., and head of its subsidiaries, the Kansas Flour Mills Corp., and the Velier & Spies Milling Corp. of St. Louis. He succeeds Ralph W. Hoffman who retired as president but continues as a member of the board of directors.—P. J. P.

John Stark was chosen second vice-president of the Kansas City Board of Trade in a very close election. Roy E. Swenson was unopposed for president and G. A. Johnson succeeded to the office of first vice-president. Directors elected were E. R. Jessen, R. H. Sturtevant, F. J. FitzPatrick, D. C. Bishop, Warren Root, E. F. Merrill. The new officers were installed at the Jan. 14 meeting.

Directors of the Grain Clearing Co. recently were elected as follows: P. D. Bartlett, E. E. Klecan, J. F. Leahy, F. A. Theis. At a meeting of the directors board on Jan. 9, Mr. Theis was named president; H. J. Smith, first vice-pres.; Harold A. Merrill, second vice-pres., and Mr. Bartlett, sec'y-treas. G. G. Lee was re-appointed manager for the 37th consecutive year, and R. D. Cline, assistant manager. Carryover directors are Messrs. Merrill, Smith and E. R. Jessen.

MONTANA

Havre, Mont.—Arthur Potvin, manager of the Farmers Elevator, delivered a talk on the marketing and handling of grain and grain products before a meeting of local Rotarians Dec. 26.

NEBRASKA

Columbus, Neb.—The Columbus Grain Co. elevator is installing a large platform scale.

Wisner, Neb.—Norman Horst has succeeded Reuben Bates as manager of the Farmers Elevator.

Greeley, Neb.—Bert H. Cronin, 63, former local grain dealer, died at his home in Omaha Jan. 10 after a three days' illness.

Murdock, Neb.—Henry E. Carson, manager of the Farmers Elevator, has been confined to his home with a serious attack of influenza.

Stromsburg, Neb.—Carl Westring has leased the Stromsburg Mill which has been owned and operated the last eight years by David V. Peterson.

Saronville, Neb.—Leland Deaver, manager of the Saronville Grain Co. elevator, has resigned due to ill health. Grant Holmes is the new manager.

Beatrice, Neb.—G. W. Rains has taken over his duties as manager of the Farmers Elevator. Mr. Rains was formerly connected with B. C. Christopher at Friend.

Omaha, Neb.—Gold pins were presented to employees of Allied Mills who have been with the company 10 years at the company's annual dinner at the Paxton Jan. 12.

Peru, Neb.—C. C. Coatney has purchased the Hutchinson Grain Co., owned and operated by Harry Hutchinson, and took charge of the business the middle of this month.

Pocahontas, Neb.—A large truck of the Bowman Milling Co., loaded with cottonseed meal, went into a ditch recently near Oak Ledge Inn and was wrecked. No one was injured.—P. J. P.

Fender, Neb.—Reuben Bates, formerly of Wisner, Neb., is the new manager of the Moseman Lumber Co. elevator. He had been managing the Farmers Elevator at Wisner for the last year.

Hartington, Neb.—Ed Olsen, 78, retired grain dealer, died in California Jan. 4 while visiting his son. He was manager of the John Herfens elevator for 14 years, later managed an elevator at Magnet for two years, resigning because of ill health.

Stella, Neb.—Harold Bourke is in charge of the Stella Grain Co. elevator, recently purchased by Ralph L. Davison of Kansas City, associated with the Hart-Bartlett-Sturtevant Grain Co. Mr. Bourke has been employed at the elevator for several years. Mr. Davison will make frequent visits here to look after elevator interests.

Bee, Neb.—Frank Vondra bot the Updike Elevator and is having it taken down. The elevator was built in 1889.

Lincoln, Neb.—George E. Truman retired Jan. 13 as sec'y of the state railway commission and recommended the commission be given authority to fix grain warehouse registration fees. He sent his proposal in a letter to Senators E. M. Neubauer, Orleans, and John Calla, Odell, chairmen of the agricultural and appropriations committees respectively. Mr. Truman said it would be necessary to reduce the warehouse fees if the commission is to retain jurisdiction over Cargill, Inc., terminal elevator, the only terminal elevator supervised by the commission.

Omaha, Neb.—Raoul Levy, 29, French-American member of a French tank corps when the Germans invaded France, succeeded in reaching this city Jan. 6 after months of wandering, and joined the office staff of the Continental Grain Co. He worked for this company in Antwerp, Holland, Casa Blanca, Algeria, and New York. He was called to France from New York last year at the outbreak of war in that country. Levy has an interesting tale of good luck that has followed him thruout his war

experience and wanderings, when he narrowly escaped death on many occasions.

NEW ENGLAND

Milford, Conn.—George Marriner, 56, manager of the Milford Grain Co., died in December.

NEW YORK

Narrowsburg, N. Y.—The Narrowsburg Feed & Grain Co. has been organized by Joseph H. Barnes, Leland M. Dailey and Janie Sterne; incorporated for \$20,000.

Cuba, N. Y.—Phelps & Sibley report a small loss occurring Jan. 4 in their warehouse "B" caused by accidental contact of a wood safety screen framing with an idler pulley.

Delhi, N. Y.—The Delhi Milling Co., Herbert M. Dawson, owner, will rebuild its plant, destroyed by fire in December. The mill is expected to be completed and ready for operation early in February.



Celebrates 50th Anniversary By Building NEW Plant

Here is the NEW and outstanding plant we have just completed for Geo. P. Sexauer & Sons at Brookings, S. D., who are celebrating their 50th anniversary.

Many innovations were introduced in this plant—it contains 22 cleaners, a dust collector system, 42 bins, 14 legs and has 4 milling floors.

You Can Profit By Our 50 Years' Experience

Write us in full confidence. There is no obligation attached to a request for information or for consultation. Tell us your problem—we'll solve it.

T. E. IBBERSON COMPANY

Engineers and Contractors

Minneapolis, Minn.

Buffalo, N. Y.—Employees of the Buffalo plant of Allied Mills with more than 10 years of service were entertained by executives of the company at a dinner in the plant. Service pins were presented to employees by Executive Vice-Pres. John B. DeHaven of Chicago.—G. E. T.

NORTH DAKOTA

Minnewaukan, N. D.—The Farmers Union Elvtr. Co. has opened a new feed mixing plant.

Ayr, N. D.—New roofs have been put on the International Elvtr Co. plant by the T. E. Ibberson Co.

Wildrose, N. D.—Maurice Monson is the new manager of the Imperial elevator here, succeeding George Medalen.

La Moure, N. D.—George Young, 80 years old, formerly engaged in the grain business here, died Jan. 11 following a week's illness.

Tokio, N. D.—C. D. Graves has sold his elevator business and filling station here to Dick Warner, who assumed the management on Jan. 2.

Wyndmere, N. D.—Fire caused by insufficient clearance for a smoke pipe from a new type of office stove did considerable damage to the office of the Farmers Elvtr. Co. on Jan. 4.

Hettinger, N. D.—The Hettinger Co-operative Equity Exchange recently installed a 28x9-ft. 20-ton Fairbanks Truck Dump Scale that will accommodate all of the largest trucks and equipment. The scale was installed by the T. E. Ibberson Co.

Bisbee, N. D.—The Farmers Elvtr. Co. of Bisbee with a capital stock of \$10,500 and an indebtedness of \$22,000 has turned its elevator over to Turle & Co. However, this does not cancel the indebtedness of the corporation unless accepted by the creditors in full settlement of the company's liabilities.

Harvey, N. D.—The Farmers Union Elvtr. Co. is operating its new 35,000-bu elevator, recently completed by the Hogenson Const. Co., designers as well as builders of the structure. It is equipped with latest type machinery, and Fairbanks-Morse Motors, Fairbanks Dump Scale, Strong-Scott Air Lift, head drives and Hart-Carter Cleaner. A feature of the plant is its wide driveway with office and warehouse attached. A full basement extends under the entire office and warehouse.

Railroad Claim Books

(Duplicating) require little of your time for filing, and contain spaces for all the necessary information in the order which assure prompt attention by the claim agent. They increase and hasten your returns by helping you to prove your claims.

- A is for Loss of Weight in Transit Claims.
- B—Loss in Market Value Due to Delay in Transit.
- C—Loss in Quality Due to Delay in Transit.
- D—Loss in Market Value Due to Delay in Furnishing Cars.
- E—Overcharge in Freight or Weight.

These claim blanks are printed on bond paper, well bound in book form, each book containing 100 originals and 100 duplicates, a two-page index, instructions and summary showing claims unpaid, and four sheets of carbon.

The five forms are assembled in three separate books, each of 200 leaves, weight 3 lbs. Price of each book \$2.00, plus postage.

- 411-A contains 100 sets all Form A.
- 411-E contains 100 sets all Form E.
- 411-5 contains 60 sets Form A, 10 Form B, 10 Form C, 10 Form D and 10 Form E.

Grain & Feed Journals

Consolidated

332 South La Salle St. Chicago, Ill.

Minot, N. D.—Farmers Co-operative Elvtr. Co. has let contract to the Hogenson Construction Co. to design and build a 200,000-bu. concrete storage addition to its present plant. The structure will consist of 8 cylindrical tanks with 5 intermediate bins, and space for one leg. The height of the tanks is to be 110 ft. from concrete slab with a conveyor gallery 9 ft. high and head-house extending 24 ft. above tanks. The new plant to be built adjacent to the present concrete tanks. Grain will be received thru the present work house and transferred by use of belt conveyor at top to the new storage. A leg with 3,500 bus. capacity will be installed extending to the bottom of the tanks. This leg will be used for lifting grain from one belt conveyor to another and also for loading grain into cars. Grain loaded into cars will be weighed over a Richardson Automatic Scale. This structure will be fireproof throughout, using steel leg casing, steel spouts, steel belt loaders, conveyor rolls and all other bearings to be anti-friction roller and ball bearings. The electric manlift will have a capacity of two men and equipped with automatic limit switches. Extensive changes will be made in the present plant to speed up receiving and handling of grain. Receiving legs will be equipped with high speed buckets and larger motors. A track pit will be provided for unloading grain from cars and cleaner legs in this pit arranged for receiving grain from cars and cleaners. Work floor space will be enlarged by changing some of the deep bins to overhead bins to provide space for additional cleaners. Screw conveyor at top of present concrete tanks is to be replaced with a 24-inch belt conveyor and tripper.

OHIO

Lodi, O.—Herbert A. Falconer has been made manager of the Tyler Grain Co. plant.

Maple Grove, O.—The Maple Grove Elevator sustained a small loss from high winds.

Ashville, O.—The Ashville Grain Co. reported its property damaged slightly by recent high winds.

Findlay, O.—Charles George has succeeded N. G. Bennett as manager of the Farmers Co-op. Elevator.

Lodi, O.—Herbert A. Falconer has been appointed manager of the Tyler Grain Co. plant, entering upon his duties Jan. 4.

Utica, O.—Frank H. Colville installed a Kelly Duplex Hammer Mill and a Kelly Duplex Vertical Feed Mixer, ton capacity with motor drive.

Huron, O.—The proposed \$2,000,000 development which includes a grain elevator and mill, announced several months ago, is still pending. The Eastern States Co-operative Milling Co., Buffalo, has bot a tract of land on the east bank of the river.

Republic, O.—The elevator of the Mercantile & Elvtr. Co. was burglarized early Jan. 9, the loot consisting of about \$20.40 in coin. Entrance to the elevator office was gained by breaking the glass in the door. C. L. Oakleaf is manager of the plant.

Columbus, O.—The Industrial Milling Products Co. has been formed to engage in the production and manufacture of products and materials obtained from corn products, wood products and various kinds of farm and industrial wastes. Authorized capital, 200 shares, n.p.v. Incorporated, Roy M. Schmeck, Edith McNeal and Madeline Melancon.

Bellevue, O.—William C. Keiner, 57, manager of the Bellevue Farmers Grain Co. elevator and prominent civic leader, died Jan. 3. He had been seriously ill since last October. Mr. Keiner had been manager of the elevator for the last 30 years. Previous to that he was employed at the former Gardner Grain & Milling Co., starting work there at the age of 15 years.

USE CLELAND Cleaners



For Most Efficient Cleaning, Largest Capacity, Handles All Grain or Seed, Lowest Price Quality Construction—Built in 6 Sizes.

Write
CLELAND MFG. CO.
Minneapolis, Minnesota
Established 1824

OKLAHOMA

Pryor, Okla.—O. J. Borum of the Pryor Lumbar & Grain Co., is a new member recently enrolled in the Oklahoma Grain & Feed Dealers Ass'n.

Tulsa, Okla.—Lester Chick, formerly manager of the Mountain View (Okla.) Farmers Co-op. elevator, has accepted a position with the Shannon Feed Co.

Mountain View, Okla.—G. R. Phelps has been employed as manager of the Farmers Co-op. Ass'n, taking over his duties at the elevator on Jan. 1. He succeeds Lester Chick, who resigned.

PACIFIC NORTHWEST

Connell, Wash.—Lloyd Howton has resigned as manager of the Connell Grange Supply and as mayor of Connell, and has moved to a ranch southeast of here.

Hatton, Wash.—The Connell Grain Growers, Inc., have let a contract to the Hogenson Const. Co. to build an addition to their present plant here, work to start about Feb. 1.

Redmond, Ore.—The farm implement department of the Deschutes Grain & Feed Co. has been moved to the new building recently completed across from the main warehouse. W. V. Merchant is manager of the department.

Frischknecht (Connell p. o.), Wash.—The Connell Grain Growers, Inc., with main office at Connell, expect to build an addition to their present local plant, work to start about Feb. 1. Contract for the construction has been let to Hogenson Const. Co.

Portland, Ore.—The annual election of the Portland Merchants Exchange was held Jan. 21. The following had been previously reported by the nominating com'te as recommendations for election as directors for the coming year: L. R. Rogan, V. A. Driscoll, L. E. Cable, F. S. Roberts, Capt. Clyde Raabe, Capt. J. A. Hazelwood.

Hillsboro, Ore.—The Valley Feed-Seed Store, Inc., has been established here by Ed and Jacob Schneider and F. A. Waibel, partners in the new enterprise. The firm started business Jan. 8 in a new 30x80-ft. building on West Main St., where new equipment has been installed. The Messrs. Schneider were in the feed business here for 15 years with the Hillsboro Feed Co. Mr. Waibel was employed in gasoline delivery.

Redd (Page p. o.), Wash.—It is quite possible that we will construct an elevator at Redd, on the Snake River, for the shipment of wheat by barge on the Snake and Columbia Rivers to lower Columbia River points. This depends on whether the dredging operations on the rivers to Redd are completed in time for shipment during the coming season; if not, construction will probably be delayed a year.—Connell Grain Growers, Inc., Connell, Wash.

Van Sycle (Helix p. o.), Ore.—The Farmers Mutual Warehouse Co. with offices at Helix, Ore., operator of several elevators under the efficient management of Frank E. Engdahl, has completed a 140,000-bu. plant here. It is a duplicate of the company's plant at Stanton, Ore., both plants designed and constructed by the Hogenson Const. Co. The Farmers Mutual Warehouse Co. was one of the first companies to initiate handling of grain in bulk and to build up-to-date elevators in this section of Oregon.

PENNSYLVANIA

Philadelphia, Pa.—John K. Scattergood, 65, grain and investment broker, died Jan. 18 at his home. He was a partner of S. F. Scattergood & Co., grain merchants.

Woodville, Pa.—William W. Campbell, 76, the last of five sons of Joseph Campbell, who founded the Campbell Flour & Feed Mill, died after a brief illness. He operated the milling business until he retired last April, having taken over the business in 1917 when his father died.

SOUTH DAKOTA

Freeman, S. D.—William H. Borman, 57, veteran grain dealer here and of Marion, died of pneumonia at his home here Jan. 15.

Rockham, S. D.—E. C. Swartout is new manager of the Rockham Farmers Elvtr. Co. elevator, succeeding R. L. Scandrett who resigned.

Sisseton, S. D.—The Sisseton Feed Mill recently installed a new cleaner.

Rapid City, S. D.—Lloyd Early, formerly manager of the Tri-State Milling Co. office at Sturgis, has been transferred here, effective Jan. 1.

Wallace, S. D.—William Urevig has resigned his position as manager of the Farmers Elevator Co. to accept a new position with the Benson-Quinn Commission Co.

Brookings, S. D.—Elmer Sexauer, president of the Grain & Feed Dealers National Ass'n, will preside over the farm forum at a conference of business and agricultural leaders of Nebraska, Iowa, South Dakota and Wyoming to be held in Omaha, Neb., Jan. 29.

SOUTHEAST

Miami, Fla.—The Happy Feed & Supply Co. has been organized; 100 shares, \$50 par value; H. P. Smith, B. F. Smith, J. O. Cornette, directors.

Hot Springs, Va.—The 1941 convention of the American Feed Manufacturers Ass'n will be held here, at the Homestead Hotel, June 12-14. Ralph M. Field is president of the ass'n.

Richmond, Va.—E. H. Heatherbelt assumed the post of local branch manager for the Quaker Oats Co., succeeding I. S. Riggs. Mr. Riggs was promoted to sales manager of the eastern division, with offices in Chicago.

TENNESSEE

Memphis, Tenn.—A branch of the Ready Food Co., Inc., manufacturer of dog foods, is to be located here, to take care of distribution for the entire south.

Memphis, Tenn.—H. L. McGeorge has been nominated without opposition for the presidency of the Merchants Exchange. Mr. McGeorge was president of the Exchange in 1935 and has held the same office with the American Feed Manufacturers Ass'n two terms.

TEXAS

Canadian, Tex.—The Ingwersen Feed, Grain & Seed Co. recently installed a new feed mixer.

Texhoma, Tex.—Freeman Bros. recently completed a mixed feed plant of 200 bus. an hour capacity.

Bartlett, Tex.—The Hill Grain Co. is building a 24x50-ft. structure, to serve as a warehouse and office for the firm.

Sour Lake (Grayburg p. o.), Tex.—A warehouse containing 3,000 bales of hay, the latter owned by Isaac Pelt, local feed dealer, was destroyed by fire Dec. 21.

WISCONSIN

Hawkins, Wis.—Fire completely destroyed the Alex Zasoba feed store here.

Slinger, Wis.—The A. B. R. Grain Co. increased its capital from \$10,000 to \$20,000.

Allenton, Wis.—Menger's Elevator installed a Kelly Duplex Ear Corn Crusher and Feeder.

Valders, Wis.—The Valders Elvtr. Co., Inc., has installed a Strong-Scott Molasses Mixer at its elevator.

Balsam Lake, Wis.—The Nelson Feed Mill, damaged by fire recently, has been repaired and has resumed operations.

Hortonville, Wis.—The old Buckman flour and feed mill, long a landmark on the banks of the mill pond here, is being razed. The mill operated until about four years ago.

Bangor, Wis.—Fire from an overheated exhaust pipe, on Jan. 10, damaged the building owned by the Bangor Milling Co. and operated by A. G. Schuster. Loss was small.

Superior, Wis.—Edward W. Richardson, editor of the Ladysmith, Wis., News, has been named state grain and warehouse commissioner, succeeding Charles Peacock, whose term expired recently.

Superior, Wis.—Consideration is being given to expansion of the King Midas mill in Superior's East End. Erection of 16 steel bins for storage of wheat used in Superior has been suggested.

Lyons, Wis.—The building housing the offices, warehouse and mill of Feser Feed & Fuel Co. was destroyed by fire Jan. 4. New feed milling and mixing machinery, a 50-h.p. electric motor and a quantity of stored feed were ruined.

Durand, Wis.—The Pfeiffer Elvtr. Co. elevator was destroyed in a fire that broke out two days following the fire that damaged the plant to the extent of \$10,000. Virgil Van Dyke was manager. Spontaneous combustion was believed to have caused the first blaze.

Hammond, Wis.—The Roberts Elvtr. Co. has made extensive improvements at its plant, adding new machinery and equipment. A hammer mill and 50-h.p. motor with drag feeder and speed control have been added and new bins constructed. The T. E. Ibberson Const. Co. did the work. The mill is now one of the most modern grinding and feed mixing mills in the community.

Milwaukee, Wis.—The Kurth Malting Co.'s 600,000-bu. barley storage annex has been completed by McKenzie-Hague Co. It consists of ten cylindrical reinforced concrete bins, each 24 ft. 6 in. in diameter by 121 ft. high. It has eight side pocket bins and four interstice bins. The cylindrical bins are arranged in two rows, five to the row, and form a continuous extension of the old storage bins which have heretofore been used half for malt and half for barley. A 30-inch belt conveyor delivers grain to any of the bins of the new storage unit. The 14-inch screw conveyor across the inside end of this new storage unit facilitates the transfer of grain from the receiving belt to belts over the old barley storage bins. An Ehrsam automatic tripper takes grain from the 30-inch conveyor belt above the bins and delivers it to any bin in the new storage unit. Two 26-inch conveyor belts below the new storage unit carry grain back to the conveyor belts under the old storage unit. This gives the malting company a total storage capacity of four million bushels. Three steel malt bins were also erected on top of the malt storage bins.

Markleville, Ind.—The Chicago office of the Wage & Hour Division having rendered an opinion that the Markleville Elevator Co. is not engaged in interstate commerce, the suit brought by a former employee in the circuit court at Anderson will no doubt be withdrawn.

Confirmation Blanks

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If you would avoid trade disputes and differences, and prevent expensive errors, use triplicating confirmation blanks. You retain tissue copy, sign and send original and duplicate to customer. He signs and returns one and retains the other.

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Fifty confirmations in triplicate, bound with pressboard and wire stitched, size 5½x8". Order Form No. 6 CB. Weight, 9 oz. Price 75c; three copies \$1.95, plus postage.

Grain & Feed Journals
CONSOLIDATED

332 South La Salle St., Chicago, Ill.

Open Interest in Future Deliveries

As reported by the C.E.A. for wheat, corn, oats and rye, and by the Board of Trade Clearing House for soybeans the open interest in all futures on the Chicago Board of Trade recently has been as follows, in 1,000 bus.:

	Wheat	Corn	Oats	Rye	Soybeans
Aug. 3	80,359	22,134	9,571	16,427	1,778
Aug. 10	82,082	22,982	10,061	16,734	2,390
Aug. 17	80,492	22,585	10,131	16,515	2,781
Aug. 24	77,384	22,927	10,164	16,075	2,906
Aug. 31	70,137	22,470	10,403	15,469	2,963
Sept. 7	60,516	22,779	10,560	14,290	3,010
Sept. 14	59,707	22,075	10,961	13,962	3,038
Sept. 21	58,871	19,176	10,132	14,601	3,168
Sept. 28	58,175	19,454	10,115	14,316	3,331
Oct. 5	57,283	19,641	10,119	14,273	3,531
Oct. 11	56,279	19,516	10,192	14,558	4,321
Oct. 19	55,539	20,287	10,392	14,562	5,273
Oct. 26	55,850	20,811	10,382	15,014	5,976
Nov. 2	54,629	22,070	10,466	15,107	6,477
Nov. 9	55,877	22,771	10,380	14,860	7,180
Nov. 16	54,534	24,088	10,560	14,794	7,150
Nov. 23	56,038	25,156	10,658	14,951	7,356
Nov. 30	55,726	24,765	10,380	14,144	6,975
Dec. 7	55,891	24,864	9,978	12,674	6,851
Dec. 14	55,477	24,910	9,982	12,105	*7,042
Dec. 21	50,179	22,509	9,858	12,550	6,859
Dec. 28	50,621	22,695	9,649	12,297	6,971
Jan. 4	49,476	22,493	9,200	12,743	6,842
Jan. 11	48,528	22,639	9,075	12,761	7,374
Jan. 18	47,827	23,795	9,210	12,779	7,995

*Reported under Commodity Exchange Act beginning Dec. 9.

Minneapolis, Minn.—The Northwest Crop Improvement Ass'n plans to publish a second edition of its "Spring Wheat Dictionary" soon. It proposes to cover all varieties of hard red spring and durum wheats grown in the Northwest, including all new varieties and all new names of old varieties.

Drum Type Magnetic Separator Cleans Self

Automatic and continuous operation and separation of tramp iron from grains or ground materials is the claim for the drum type magnetic separator, bearing the "High Duty" trade mark of the Stearns Magnetic Manufacturing Co.

The Type "LS" illustrated here is designed for dust-tight application to spouts, and is made in various sizes to fit different spout capacities. This separator attaches directly to the spout. It is of all-metal construction, with a smooth interior, free from corners or confined spaces where odd shaped bits of iron can lodge and interfere with the free flow of materials from which the powerful magnet separates tramp iron.

The separator consists essentially of a metal box containing a feed regulating valve, and a trough that spreads material across the surface of a revolving drum. Inclosed in this revolving cylinder is an exciting coil. The drum face over which the feed passes is kept highly magnetized thru a stationary 160 degrees of its revolution. The material passed thru the separator uses little more than half of this 160 degrees of magnetized surface and drops free from the drum on one side of a divider to pass on down a spout. The tramp iron sticks to the drum thru the entire 160 degrees of magnetized surface, and is carried half way around the revolution of the drum before it drops free. Thus it drops on the opposite side of a divider and is automatically diverted into a tramp iron box.



Drum Type Magnetic Separator.

Grain Carriers

In 1939 grain and grain products formed 5.7 per cent of the total freight car loadings.

Investment per mile of line of railroads in the United States increased from \$74,465 in 1916 to \$109,331 in 1939.

Grain and grain products were loaded into 34,421 cars during the week ending Jan. 11, compared with 2,549 cars during the corresponding week a year ago, reports the Ass'n of American Railroads.

Toledo, O.—Clare B. Tefft, transportation manager for the Toledo Chamber of Commerce, has been delegated to represent Toledo interests at the Chicago hearing before the Interstate Commerce Commission on the Tex-O-Kan Milling Co. rate case. In this case the lake interests are contending that combined rail-water rates established from the Southwest to north Atlantic ports are discriminatory.

Morris, Ill.—The Cooperative Allied Grain Dealers Corp., with elevators here and at Seneca on the Illinois river, is reported to have shipped nearly 12,500,000 bus. of grain over the Illinois river by barge during 1940. This figure exceeds that of last year by 2,500,000 bus., an increase of 25%. The grain, mostly corn and soybeans, moved to the barge loading elevators by motor truck from points as far as 50 miles inland. The Finnegan barge loading elevator on the south side of the river at Morris is reported to have been out of operation for the last nine months.

"Subsidy to the country's railroads, proportionately as great as the public aid now extended to inland waterways, would amount to almost \$3,500,000,000 a year," declared Z. G. Hopkins, representing the Western Railways' Committee on Public Relations. "The degree of financial relief the railroads would enjoy from public aid proportionate to that the inland waterways now receive," Mr. Hopkins continued, "may be better appreciated when it is considered that such a subsidy would about equal the annual freight revenues of the railroads, under present conditions."

Omaha, Neb.—The Interstate Commerce Commission has dismissed a complaint against rates on grain and grain products from northeastern Colorado and southwestern Nebraska points to Omaha, Neb., and Council Bluffs, Ia. At the same time the Commission found not unreasonable rates from the same points to St. Joseph, Mo., and Kansas City, Kan.-Mo. Behind the complaint, which was supported by the Omaha Grain Exchange and the Nebraska Railroad Commission, was the Nebraska-Colorado Grain Producers Ass'n. This ass'n contended competing producers in other wheat producing areas enjoyed more favorable rates to other markets.

Pacific Northwest Needs Its Inland Waterways

"The problem of marketing for agriculture and industry in the Pacific Northwest," John W. Shepard, vice-president for Idaho of the Inland Empire Waterways Ass'n, told 200 river transport enthusiasts convening at the Lewis-Clark Hotel, in Lewiston, Ida., recently, "can be solved best by seeing that the transportation act of 1940 (Wheeler-Lea bill) is administered so as to protect river transportation and make its advantages available to the people of this territory."

"Lewiston can do its part," he said, "in providing tonnage up and down the Snake and Columbia rivers." He claimed one Lewiston firm can deliver 500 tons to barges every working day. Mr. Shepard, who is manager of the Lewis-

ton Grain Growers, Inc., added that "7,000,000 bus. of wheat go thru the gateway of Lewiston each year."

Depressed prices and loss of markets as a result of changing economic conditions, said the speaker, made the need for low-cost transportation a major problem of the Northwest.

St. Lawrence Waterway Scheme Derided

Four objections to the St. Lawrence waterway route to connect the Great Lakes to the Atlantic Seaboard with a channel deep enough to carry ocean steamers, are voiced by Dr. Lewis Haney, professor of economics, at New York University.

He claims it would be slow, it would be icebound a third of the time, it would involve scrapping already existing and entirely adequate transportation facilities, and that there is no appreciable demand to move export wheat.

Bean Transit Rate Change Justified

A change in transit rules on outbound shipments of beans from transit stations in western trunk-line and southwestern territories, as proposed by the railroads, and suspended on protest from the Rocky Mountain Bean Dealers Ass'n, and the Trinidad Bean & Elevator Co., both of Denver, Colo., has been found justified by the I.C.C., in I. & S. No. 4823, and its order of suspension was vacated as of Jan. 10. The change proposed by the railroads reads:

WHEN THE ACTUAL WEIGHT of the shipment from the transit station is 24,000 lbs. or more, the flat carload rate from the transit station applicable to the lowest rated article in the car will be applied to the difference between the actual weight and the minimum weight, except that when freight bills are surrendered for the difference between the actual weight and the minimum carload weight, and the freight bills represent the same kind of dried beans, dried peas, or dried lentils and cover shipments from the same rate origin territory, as does the billing which is surrendered for the actual tonnage in the car, the transit balance of the thru rate will be applied to such difference in weight.

When the actual weight of the shipment is less than 24,000 lbs. the flat carload rate from the transit station applicable to the lowest rated article in the car will be applied to the difference between the actual weight and the minimum carload weight.



HESS DIRECT HEAT DRIER.
HAMLET GRAIN CO., HAMLET, IND.

Supply Trade

Chicago, Ill.—F. R. St. Lawrence has resigned his position with the James Stewart Corporation.

Chicago, Ill.—Guy Henderson, long with the Webster Mfg. Co., and for years a member of the elevator building firm of Henderson & Friedline was buried Jan. 21st.

Buffalo, N. Y.—Because of the illness of Harry R. Wait, president of the Monarch Engineering Co., which has long specialized in the designing and construction of grain elevators, this company has discontinued business.

Milwaukee, Wis.—A new bulletin No. 92-C has been issued by the Stearns Magnetic Mfg. Co., makers of magnetic separators and magnetic power transmission devices, which describes the line of automatic safety trap spout magnets used in the milling, feed and allied industries and contains descriptive data, specifications, illustrations and drawings for making installations. A copy will be sent on request.

Schenectady, N. Y.—The increasing demand for larger motors for hazardous gas and hazardous dust locations, brought about by the defense program, has been filled by the development during 1940 of large totally-enclosed, fan-cooled motors in both a-c and d-c ratings. D-c generators have also been made available. In sizes beyond the range of the self-contained totally-enclosed fan-cooled designs, inert gas-filled motors have been provided.

Schenectady, N. Y.—Orders received by General Electric Co. during the year 1940 amounted to \$654,190,000, compared with \$360,748,000 for 1939, an increase of 81 per cent, President Charles E. Wilson has announced. Orders covering equipment for national defense purposes amounted to approximately \$250,000,000, with the result that the total volume of business in 1940 was greater than that for any other year in the company's history.

Canadian oats are reported as offering rather keen competition with the domestic grain in the east, tending to check the demand for shipment from the west. Stocks at terminal markets are the smallest since 1903.—Fred A. Record.

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Storage Charges Insurance

By O. M. EARL of the Grain Dealers National Mutual Fire Ins. Co.

Elevator operators signing an agreement with the Secretary of the Department of Agriculture to store Commodity Credit Corporation grain, must rely in varying degrees upon the storage charges derived therefrom for operating income. If prevented from completing their contracts through the accidental destruction of their buildings, all income from storage charges will stop—hence the interest shown in insurance to protect such income.

The intent and purpose of Storage Charges Insurance is to reimburse the elevator operator for loss on storage charges on the grain, if the buildings are rendered untenable by fire, wind or other hazard named in the policy, and the contract cannot be completed. Any loss on storage charges caused by the Commodity Credit Corporation ordering grain shipped out is not covered. However, loss from that contingency is only a remote possibility as in all probability the grain will remain in storage for the full period.

The insured's loss is the amount of storage charges he is prevented from earning on the grain on storage at the time of casualty. The unearned storage charges are computed at the rate and for the number of days remaining in the period named in the Uniform Grain Storage Agreement. Loading-out charge, conditioning, insurance and all other charges provided in the Schedule of Rates are not insured. Such items are not a loss until the expense has been incurred and when the expense has been incurred it is earned and recoverable under the Storage Agreement.

Storage Charges Insurance gives the operator indemnity against loss of income on storage charges and that is what he is most interested in.

Growing Soybeans in the Pacific Northwest

Spokane, Wash.—After several years of experimentation the soybean seems to have been proven an answer as to what can be grown on the irrigated lands of the Spokane valley and Rathdrum prairie.

At Dishman, it is found that the Jacklin Seed Co. has during the past few years been carrying on experimental planting of soybeans in three and five acre patches in most every section of northern Idaho and eastern Washington.

It is found that both the quantity and quality of the soybean grown in these sections are exceptionally good. Mr. Jacklin urges making haste slowly. Try an acreage that can be worked easily and inoculate the seed, as it draws much of its growth from the air and returns much back to the soil. He advises growing the second year on the same ground before making a final decision as to its value as a crop on the land.—F. K. H.

Falls City, Neb.—The Falls City Milling Co. admitted violations of the wage-hour law in a consent decree filed in the district court and agreed to avoid further violations. U. S. Attorney Fred Hawxby reported the case as one in which there was no apparent intent to disregard the law.

Books Received

VITAMINS, what they are, and how they can benefit you, correctly describes this up-to-date compilation of all that is known of human interest in this absorbing development in nutrition. It answers all questions as to the requirements of the human body for the several vitamins. Misleading advertising is criticized. By Henry Borsook, professor of biochemistry, California Institute of Technology; cloth, 193 pages; \$2; the Viking Press, New York, N. Y.

Commodity Credit Corp. Revises Forms

[Continued from page 60.]

matically thru the mill for checking, final approval, and payment of the claim.

THE F.O.B. (TRACK) country price recorded in the "Schedule of Transit Losses or Gains" is the destination price, less freight and charges, the day of shipment. If this price stands at a maximum and minimum, as, for example, 53¢@54¢, the price shown would be 53½¢ to split the difference. Thus, the shipper is given the price at which he may submit claim for his over-runs, as well as a procedure for submitting his claim. It has been a fairly common practice for shippers to fill cars so they over-run. Consequently it has been necessary to work out this procedure for handling overages as well as shortages.

In the case of shortages the C.C.C. deducts from invoiced charges its claims for shortages on the same basis as it allows claim for over-runs. This deduction is automatic and when country shippers practice loading cars so that if they err in their weights the tendency is for their cars to fall a little short no need arises for making claims.

A SOURCE OF DIFFICULTY to country shippers in dealing with the C.C.C. has been the necessity for filling out unfamiliar forms, and for getting certifying signatures from all parties involved in a shipment of

corn. It must be recognized, however, that the C.C.C., as the commodity loan agency of the Agricultural Adjustment Administration, handling loans on and deliveries of wheat, corn, rye, and barley over a very large portion of the country, is a large institution. It must depend upon records to protect all interests.

Country shippers, handling grain for the Commodity Credit Corp., can preserve their own interests best by complying with the procedure and filling out all required forms completely and as quickly as possible. This will place responsibility for delays on the shoulders of the C.C.C. and will doubtless lead to prompter payment of accounts than when correspondence is opened because some essential bit of information demanded by this government agency is overlooked in making out the original report.

Minneapolis, Minn.—General Mills' machine research laboratory is reported to have been awarded a navy contract for production of plungers for ammunition hoists. The shop is equipped for precision work on heavy duty machines and employs 75 men when working at capacity.

Washington, D. C.—Swedish scientists are reported to have developed a method for extracting edible oil from fish which may substituted for vegetable oils and fats, according to the U. S. Department of Commerce. A plant for producing 50 tons daily is planned for construction at Karlshamn.



Steinlite

is doing its PART in DEFENSE WORK

Steinlite Electric Moisture Tester is used in determining the moisture content of gun powder. This is a very important operation in the manufacture of ammunition and Steinlite does it quickly, efficiently and economically in the same manner that it tests all grain and grain products for thousands of mills and elevators in this country.



The MANGELSDORF GERMINATOR

is the only germinator on the market designed to make germination tests by both the light and the dark methods. The unit is equipped with five shelves, 10" x 15" size, and will handle a total of approximately 120 individual samples. The dimensions of the germinator are 17" high, 19" long and 12½" wide.

The temperature of the germinator is automatically controlled by a bimetal thermostat, which can be set to cover the various degrees of temperature. A 40-watt bulb is used as a heater. A circular thermometer is built in the door to give temperature reading from the outside.

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Field Seeds

Paris, Mo.—A new seed cleaning plant is being completed by H. P. Noel, and fitted with modern seed cleaning machinery.

Chester, N. Y.—Frank Durland, who established himself in the seed trade in 1885, plans to discontinue business, it is reported.

Bloomington, Ill.—Frank H. Funk, one of the members of Funk Bros. Seed Co., passed away at his home in Bloomington recently at the age of 71.

Los Angeles, Cal.—Germain Seed & Plant Co. is moving to its new building at Davis and Clark streets. Its Oakland store has been closed and future business will be conducted from the new plant.

Sacramento, Cal.—H. E. Sampson has been appointed traveling representative of F. H. Woodruff & Sons, working out of the local office. He has long been associated with the Pacific Coast seed trade.

Evansville, Ind.—Guy Purcell, head of Purcell Seed Co., was elected president of the Indiana Wholesale Seed Dealers Ass'n at its Dec. 21 meeting. He has been active in promoting several developments in the seed trade to simplify merchandising practices.

Dunkirk, N. Y.—The 3-story frame main building of the Lake Shore Seed Co. was leveled by fire Jan. 11, causing a loss estimated at \$300,000. David S. Wright, president and principal owner, says a new building will be erected at once. Company offices have been established for the present in the Wright Apartments.

Audubon, Ia.—A new two-story hybrid seed corn plant has been completed for Carlson's Hybrid Seed Corn. It is a 60x120 ft. fireproof structure of reinforced concrete, brick and tile, and is completely equipped with grading and processing machinery. Elmer G. Carlson, president of the company, is a former national corn husking champion.

Albany, Ore.—Sid Victor, sec'y of Charles H. Lilly Co., will move here about Feb. 1 to assume charge of the new plant built last summer. Joe Bohl, vice-president, and Darcy Sater, field man, who have been handling plant management along with their other duties, will transfer all of their attention to supervision of the greatly increased seed acreage going into production.

Ames, Ia.—Outstanding seed corn growers will be honored at the annual show of the Iowa Corn & Small Grain Growers Ass'n at Farm & Home Week, Iowa State College, Feb. 10-14. The Baner trophy will go to the winning entry in the state corn yield test, The Register & Tribune Corn King trophy to the producer of the highest yield in an approved 10-acre corn yield contest. Other trophies will be given for the best entries of 10, 30 and 80 ears of corn. The ass'n will hold its annual meeting Feb. 10, and awards will be made that evening.

Wakeman, O.—Charles S. Clark, Sr., head of C. S. Clark & Sons, seed corn growers, passed away Jan. 4, age 80. Mr. Clark was born at Wakeman, Mar. 21, 1860, was educated in Wakeman schools, promoted the seed corn growing business which he founded in 1878. Highly respected authority on seed corn production, and capable business man, Mr. Clark led his firm to become one of the largest producers of seed corn in the world. He was also president of the Wakeman Bank Co. Surviving are his widow and one son, Charles S. Clark, Jr., who is active in the seed corn business his father founded.

Grant's Pass, Ore.—Efforts are under way to persuade farmers to grow Chewings fescue on a commercial scale thru this district. Promoting the program is O. K. Beals, of the extension service, who is largely responsible for introduction of Ladino clover as a seed crop in the same district.

East Rutherford, N. J.—Bobbink & Atkins have completed negotiations to take over inventories and goodwill of George H. Peterson, Inc., of Fair Lawn and Paramus, N. J. Robert W. Eisenbrown, manager of the latter for the last 12 years, will be in charge of retail sales, merchandising and advertising.

Lincoln, Neb.—Grain sorghums left in the field in the wet, cold weather in late November suffered serious damage from the germination standpoint, according to R. C. Kinch, state seed analyst. Germination tests have shown a large number of lots of Atlas, early kalo and milo are practically worthless for seed purposes. Kinch suggests germination tests before seeding.

Seattle, Wash.—Members of the Washington State Com'te of the Pacific States Seedsmen's Ass'n met at the Washington Hotel Jan. 3 to prepare introduction of an approved uniform state seed law conforming with the federal act. Hope is expressed that the seeds laws of Washington, Idaho, and Oregon may be identical thru introduction of identical bills.

Soft-wheat varieties, Frondoso and Fronteira, introduced by the Department from Brazil have proved very resistant to leaf rust and also somewhat resistant to stem rust. These, together with highly resistant varieties of wheat previously developed in this country, are being used in breeding wheats for the southeastern part of the United States, where rusts are a limiting factor.—U.S.D.A.

Fort Worth, Tex.—The Texas Seed Council has held a number of meetings and suggests that any one interested address suggestions and comments to Dr. E. P. Humbert, chairman of the State Seed Council, College Station, Texas. It is much simpler to have your ideas considered now than after the draft of this bill gets to the legislative "hopper."—A. G. Campbell, sec'y Texas Grain & Feed Dealers Ass'n.

Des Moines, Ia.—Iowa's uniform seed bill, described in earlier numbers of the Journals, is being introduced in the current legislature under the sponsorship of the Iowa Seed & Weed Council. It incorporates provisions to prevent indiscriminate sale of farm seeds and to issue "stop sale" orders on illegal lots of seed. The latter will give seed law enforcement officials a weapon to control "fly-by-night" sellers of seed from trucks.

Geneva, N. Y.—A boost is given commercial seed inoculants by Dr. A. W. Hofer, bacteriologist at the New York experiment station, who says that samples tested during the last five years have proved uniformly satisfactory, whether made from agar, charcoal, peat, or sand. "Because for a period of 40 years after the manufacture of inoculants was begun," he adds, "the quality of these products was low, many people came to believe that the use of commercial cultures as compared to inoculation by transfer of field soil was of questionable value. At the present time there is no basis for this belief. Practically all inoculants are manufactured . . . by improved methods, under trained supervision, and regularly meet high standards."

Northwest Retail Seedmen Organize

By F. K. H.

One hundred and fifty retail seedmen from representative communities of Oregon, Washington and Idaho, convened at the Multnomah Hotel, Portland, Jan. 16th-17th, to adjust the retail seed business in the three Pacific Northwest States.

ARTHUR CAMPBELL, of the Campbell Feed & Seed Co., Longview, Wash., was the efficient chairman of the convention, and with others prominent in the retail seed trade, laid the foundation for the Tri-State Seed Men's Ass'n. Following the reading of the constitution and by-laws, which will include growers, seed producers, wholesalers, jobbers and retailers; with the bulk of the membership retailers. Membership will be divided into three distinct groups with active, associate and honorary. Many of the garden and farm machinery and seed wholesalers will be a big help to the infant organization. They made it possible to hold the initial meeting here.

Members of the organization committee, whose work was ultimately unanimously passed by members, were R. A. Miksche, Medford; H. J. Adams, Yakima, Wash.; A. L. Poole, Tacoma; Arthur Campbell, Longview, Wash.; A. B. Cooper, Caldwell, Ida.; Fred Trullinger, Jr., and Walter R. Dimm of Portland. Officers and directors of the new association will shortly be announced.

"Novelty Flower Seeds" was the subject of an address by E. D. Martin of the Waller-Franklin Seed Co., Guadalupe, Calif., illustrated with many colored slides showing the latest development in plant novelties.

Arthur Prescott, of the Chase Gardens, Eugene, Ore., in his address on "Retailing Flower Seeds" advised that considerable of the increase in sales could be attributed to the national advertising and garden clubs. He advocated the larger unit sales, and that retailers would do well to keep the 5c packs in the background.

"Merchandising for a Profit" was the subject of an interesting discourse by R. A. Miksche of Monarch Seed & Feed Co., Medford, Ore.

A round table discussion followed the address of Lawrence Robinson of Lawrence, Robinson & Sons, Modesto, Cal.

"Peas, Beans & Corn" and the increase in sales on these items was discussed at length by George Crookham, Jr., of Crookham Co., Caldwell, Idaho.

Among those on the afternoon program were Joe Bohl, of Chas. H. Lilly Co., Seattle, speaking on "Root Vegetables"; "Top Vegetables," by Don Hoover, Ferry-Morse Seed Co., San Francisco; Pets and Pet Supplies, by J. Earl Duthie, of Duthie Co., Lewiston, Idaho.

Dean Collins, of Portland, was the initial speaker at Friday's session, speaking at length on "What the Customer Expects of the Seedman." "In spite of old and new world conditions we will always need to keep on planting; in fact we anticipate that seed men can expect a greatly increased business as industry is turning to the Pacific Northwest states." Mr. Collins predicted that as a result of the foreign wars the West Coast will inherit, whether it seeks it or not, an increasing position of importance in the production of seeds.

An interesting paper on "Retailing Fertilizers" was read by R. V. Sluman of Swift & Co. "Lawn Grasses" of various kinds were dwelt upon at length by Harold Adams of the Beard-Adams Seed Co. of Yakima, Wash.

Norman Oliphant, of Portland Seed Co. gave an interesting selling demonstration, contributed by the manufacturers.

Final attraction for the seed dealers, growers and wholesalers was the movie on "The Black Scourge" and "Feeding the Multitude" with the compliments of Bayer-Semesan Co.

Marion Oats Boosted

"Marion" is the name of a new variety of oats developed at experiment stations under the sponsorship of the U. S. Department of Agriculture, O. T. Bonnett, assistant professor of plant genetics at the University of Illinois told Farm & Home Week visitors at the College of Agriculture, Urbana.

Marion oats are resistant to stem rust, leaf rust, and smut, he said. This oat has a strong straw, withstands extremes of climate, yields well, and produces good quality grain.

Legume Seed Production High

Alfalfa seed production was the second largest on record last year, the national crop totaling 1.5 million bushels, according to the U. S. D. A. In North Dakota, South Dakota and Montana the harvest was 77% above the average.

Red clover growers harvested 2 million bushels of seed, nearly twice as much as usual. Alsike production for 1940 was about 422 million bushels, approximately one-fifth higher than the 10-year average. Practically no alsike is being imported.

Sweet clover production in 1940 was 12% above average, although one-third less than a year earlier. Total production was 900,000 bushels and the carryover of 1939 seed, 300,000 bushels. Hubam sweet clover seed is considerably short this season.

Seed Testing Improved in Kansas

President Ogren and your secretary had an interesting conference with officials of the Kansas State Board of Agriculture last week with reference to faster service on seed analyses from the state seed testing laboratory at Manhattan. We were greatly encouraged by the interest displayed by officials of the department and their eagerness to give the trade and the public improved service. Mr. Paul Ijams, director of the Control Division, and Mr. J. W. Zanley, director of the State Seed Laboratory, are organizing their forces to try to take care of the rush in much better shape than has been done before.

The following recommendations for improved service were suggested by the board officials: First, thru the co-operation of vocational agricultural classes in many of the high schools, there has been set up facilities for the testing of seeds. These classes will operate under the supervision of trained teachers, and for the testing of most common field seeds, it is recommended that the trade as well as producers make use of this seed testing service where available. Classes co-operating in this work have obtained standard equipment, and it is recommended that you get in touch with your

local or neighboring high schools who have classes co-operating in this work, and have them test as many of your samples as possible. This should relieve to a large degree the demand for service to be performed by the state laboratory.—J. F. Moyer, sec'y Kansas Grain, Feed & Seed Dealers Ass'n.

Characters of Southern Red Oats Described

An effort to clear up the confusion that exists in identity and purity of southern red oats is made in the U. S. D. A.'s Circular No. 562. This circular points out that Fulghum and Red Rustproof are persistently mislabeled, that Columbia, a new spring variety, is being sold as Winter Turf, and Fulgrain, a new smut-resistant variety, is being confused with Fulghum.

Characteristics useful for differentiating between different varieties of southern red oats are described in the circular, and compared to clarify identification. Reference is also made to the efforts of seed laboratories, and crop improvement ass'ns, to develop better seed, true to variety, and make good seed available to farmers.

Bill to Prohibit Shipments Containing Noxious Weed Seeds

Rep. Hook has introduced H. R. 2086, a bill to prohibit interstate shipments of grain, feed, hay and screenings containing noxious weed seeds. It provides that:

It shall be unlawful for any person to transport or deliver for transportation in interstate commerce—

(a) Any feed, grain or seed screenings, grains, hay, bedding, packing material, or any other material containing live noxious weed seeds unless it is stated on label or in invoice that shipment is intended for processing, cleaning, or manufacturing purposes, except for manufacturing purposes.

For the purpose of this Act, the term "noxious weed seeds" means the seeds of *Lepidium draba* L., *Lepidium repens* (Schrenk) Boiss., *Hymenophyllum pubescens* C. A. Mey., white top; *Cirsium arvense* (L.) Scop., Canada thistle; *Cuscuta* spp. dodder; *Agropyron repens* (L.) Beauv., quackgrass; *Convolvulus arvensis* L., bindweed; *Sorghum halepense* (L.) Pers., Johnson grass, *Centaurea pteris* Pall., Russian knapweed; *Sonchus arvensis* L., perennial sow-thistle; *Euphorbia esula* L., leafy spurge; and seeds or bulblets of any other kinds which after investigation the Secretary of Agriculture finds should be included.

Use Certified Hybrids

Nine out of ten acres of corn land in Iowa in 1940 were planted with hybrid seed and enough seed is probably available to at least duplicate the 1940 planting according to Joe L. Robinson, of Iowa State College.

There are good and poor hybrids, the state and local tests have shown, and the problem is to be sure of getting a good hybrid, well adapted. One way to be assured of a superior hybrid is to purchase certified seed.

Hybrid seed to be certified in Iowa must have outyielded by 10 per cent the open-pollinated varieties with which it was compared in at least 2 of the last 5 years in the Iowa (State) Corn Yield Test; it must be at least as good as the open-pollinated varieties in lodging resistance; the combined advantage in lodging resistance and yield must have excelled the open-pollinated varieties by 25% or more, in at least 2 of the years when the record for lodging resistance and yield was established; the hybrid

must have had not more than 12% more moisture than the open-pollinated varieties at harvest time.

Besides these requirements the growers are required to produce the seed in fields far enough removed from other fields to avoid contamination by the pollen from them; the detasseling must be done at the right time; germination must be high.

Misrepresenting Oats as of the Burt Variety

The Arkansas State Plant Board has found that in a few instances seedsmen are apparently trying to circumvent state and federal laws by selling oats under tags reading "Oats, Lot Burt" or "Spring Oats," perhaps striving to create the impression on the buyer that the oats are of the Burt variety, when as a matter of fact, pure Burt seed oats in quantity are practically non-existent.

The Board is expecting to scrutinize as to variety, more carefully than heretofore the oats which is placed on sale in Arkansas this winter. Should the variety not be as represented, if the shipment originated in another state the evidence of misbranding will be turned over to the U. S. Department of Agriculture. If the oats originated in Arkansas, the case will be handled under the Arkansas Seed Law.

According to the U. S. Department of Agriculture the Columbia has become an important variety of oats in this trading territory and may be superior to Burt in that it is a much more uniform variety and usually fairly easily identified by the small grayish yellow striped kernels. The Columbia originated in Missouri several years ago. It is a strictly spring variety and should not under any circumstance be sold for fall seeding.

Donley Heads Ohio Seedsmen

President H. Trimble McCullough presided over a meeting of 50 members of the Ohio Seed Dealers Ass'n, holding their annual convention at the Neil House, in Columbus, Jan. 8, and reported on the work of the organization.

Among the accomplishments mentioned as outstanding was the exhibit erected by the ass'n at the Ohio State Fair and the attention it received, was described in detail by C. B. Mills, of Marysville, chairman of the exhibit committee.

The membership committee's report showed healthy growth of the ass'n to over 100 members, which was classified as a very satisfactory increase over a year ago.

Dr. Oliver C. Lee, extension botanist from Indiana's Purdue University, talked on weeds and weed control. He showed an extensive

WEEDS and Weed Seeds

Your farmer patrons, yourself, in fact, everyone interested in the betterment of agriculture, will welcome this new book. Its 76 pages, 6x9, contain information, with illustrations of Noxious Weeds, Lawn Weeds, Poisonous Plants and aids dealers to identify noxious weed seeds. Nothing like it ever before published. Price \$1.00 plus postage.

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set of colored slides to visualize to his listeners the characteristics of noxious weeds.

In executive session, the ass'n voted to continue its Ohio State Fair exhibit, and named a committee to cooperate in educational work on cleaned, tested seeds, and weed problems.

Election of officers placed the following for the ensuing year: J. Paul Donley, president; Randolph Norwood, vice-president; C. B. Mills, sec'y-treasurer. Named to the executive committee were Wilmer Livingston, Max Scarff and Sheldon Ackerman.

Method for Breeding Soybeans

Substantial advances are being made in developing soybean varieties by hybridization, reports Martin G. Weiss, geneticist at Iowa State College.

The term "hybrid soybean" is confusing, Weiss says. It is not an actual hybrid such as hybrid corn.

"Soybeans are a self-pollinated crop and therefore a soybean corresponds to an inbred line of corn," he states. "These varieties may be crossed by controlled methods and a hybrid plant produced."

The plant resulting from such a cross is really the hybrid plant between the two varieties. Such a plant, when allowed to self for a number of generations, will break up into numerous lines.

"In self-pollinated crops, such as soybeans, selections are made in the advanced self-generations of such hybrid progeny, and each of these selections is in itself pure," Weiss explains. "When they are released they are not hybrid soybeans, but merely selections which were made from a hybrid population."

An extensive soybean breeding program was initiated at the Iowa Agricultural Experiment Station in 1937, but nothing will be available from this breeding program for a number of years. The hybrid progenies which are now in the second selfed generations will have to be selfed for several years before selections can be made.

Weiss points out that a variety of soybeans, Chief, is being released by the Illinois Agricultural Experiment Station. "This is a selection from a hybrid progeny resulting from a cross made some 8 or 10 years ago."

Hybrids Yield Well in Texas

By JOHN S. ROGERS, Agronomist, Texas Agri. Exp. Sta.

Thirteen years ago the Texas Agricultural Experiment Station started in-breeding adapted Texas open-pollinated varieties of corn for the purpose of isolating and testing the capacity of particular inbred strains which, when combined into hybrids, would produce higher yields than the best adapted commercial open-pollinated varieties. From this work a number of inbred strains have been developed and tested, and these strains, when crossed with certain other inbred strains or varieties, give hybrid seed corn which, when planted, yields better than the best commercial open-pollinated varieties.

In order to determine the yielding capacities of various hybrids and commercial varieties, tests have been made at several stations comparing the following types of corn:

1, The more important commercial open-pollinated varieties; 2, commercial hybrids from other states; 3, hybrids produced from Texas inbreds and corn belt single crosses; and 4, hybrids developed by the Texas Station.

Averaging these tests which were made at Temple, Denton, College Station and Tyler for the past two seasons, the Texas hybrids produced 50.2 bus. per acre, which was 22%, or 9.1 bus. per acre more than the average commercial field corn varieties. During the 1939 season the difference in favor of the Texas hybrids was slightly less than during the 1940 season; but all tests indicate that the advantage averages around 20%, which incidentally is

about the same advantage usually gained in the northern corn belt thru the use of hybrid seed. The commercial hybrids purchased from northern sources yielded from slightly more to slightly less than the best commercial Texas field corn, and crosses of Texas inbred strains with single cross corn belt hybrids produced better yields than did the northern hybrids, but not so good as the Texas hybrids.

The evidence in these tests points to the use of Texas Station hybrid seed corn, inasmuch as the yield is better. Also the commercial hybrids, and even the hybrids of corn belt single crosses with Texas Station inbreds were more susceptible to ear worm and weevil damage than either the Texas hybrids or the Texas grown field corn.

Spartan Leads Barleys in Nebraska

Spartan was named "king of the barleys" in the report of the University of Nebraska's college of agriculture on its 1940 experiments with small grain test plots. This variety competed with Club Mariout, Flynn, Trebi, and Short Comfort, which were scaled in the order named.

Otoe made the best showing in oats plots in eastern Nebraska, while Brunner gave the best results in central and western counties.

Nebred and Cheyenne maintained leadership among winter wheats. Nebred was recommended for the southeast because of the stem rust threat, but both varieties are approved for central and western areas.

Thatcher and Ceres led spring wheat varieties in quality, yield and rust resistance.

"Cold Test" for Hybrid Corn

A new "cold test" which indicates how hybrid corn samples will react when the spring planting season is cold and wet is being used this winter on request on samples sent in for analysis, to the Iowa State College Seed Laboratory.

Ordinarily hybrid corn is being tested for germination under what is called normal conditions. It is grown in sand at a temperature of 85 degrees F.

The "cold test" consists of placing the corn samples in different representative field soils and holding the temperature at 45-50 degrees F. for 7 days. Then the temperature is raised to 85 degrees for 2 days, and the number of normal seedlings found at the end of the 9-day period.

"An occasional lot is found that germinates almost as high as under normal conditions," R. H. Porter, head of the laboratory, says. "But most samples give lower germination."

The seed laboratory has been running similar "cold tests" on college inbreds for 2 years to give agronomists a better insight on the behavior of corn. This year the test is being used on samples sent in by hybrid seed corn producers because these seedmen have noted differences in the stand of the same hybrid when conditions of spring planting varied over the state.

The ability of hybrid seed to germinate well under the conditions of the cold test is not at present being used as a basis for certification. Porter says the test is probably more severe than is likely to occur in the field.

"This test may help producers of hybrid seed to build hybrids that will resist unfavorable spring conditions," Porter said.

Winchester, Ind., Jan. 18.—Clover seed demand has been dull lately. Looks as tho there will be plenty of seeds to go around, and there will be a good demand for heavy seed oats in the spring.—P. E. Goodrich, pres. Goodrich Bros. Co.

New Fireproof Elevator at Wichita, Kan.

The recently completed 750,000-bu. reinforced concrete storage elevator for the Consolidated Flour Mills Co., located at 29th and Frisco tracks, Wichita, Kan., was designed and built by Chalmers & Borton. It consists of 16 tanks, 6 interstices, 12 intervening and 12 headhouse bins 116' high.

The storage portion has a centrally located tunnel and an overhead gallery. On the headhouse end a boot pit and cross tunnel is provided. The 4 tanks at the end which form the head house portion are surmounted by a headhouse 70' high which provides the necessary room for the 2,500-bu. scale, garner and elevator head machinery. The upper and lower conveyor belts are 24" mounted on Ehrsam anti-friction rolls.

Provisions were made for two 6,000-bu. legs, only one being completed at this time. An employee continuous belt elevator has been provided which extends from the boot pit to the head floor.

On the lower floor of the headhouse an employee office and a dust-tight switch room has been provided. A weighmaster's office has also been provided on the scale floor and a cleaner room was built in at midway between the head and the boot of the headhouse. All motors were furnished by G.E. and all machinery and sheet metal by the J. B. Ehrsam & Sons Mfg. Co.

A track shed was provided at the headhouse end which is 22x50' in size and is of structural steel and corrugated iron. This shed also houses a double power shovel and a car puller of 10-car capacity. In addition to the operation of this elevator the Consolidated Flour Mills Co. operates five flour mills and a large number of country elevators.

See illustration on outside front cover.

Calendars Received

As 1940 draws to a close, and a new year is about to be born, calendars from our many friends come rolling in from far and wide. This year's crop is a little more colorful, a little brighter, than the calendars of recent years as a rule, reflecting an improved spirit and a brighter hope for the future among the grain dealers, and the trade that serves them. Here is the beginning of the list:

JOHN E. BRENNAN & CO. uses sharply contrasting red and black ink in a large size monthly wall calendar that is easily read from a distance.

LEARY GRAIN CO. puts its calendar, covering the first half of 1941, on a blotter, using a reverse plate to make the word "Leary" stand out in large white letters.

MORSE CHAIN CO.'S calendar is an attractive, lithographed monthly recording of dates, that shows three months on the same sheet, with the current month in bold face type to make it stand out from the preceding and succeeding months.

INTERNATIONAL HARVESTER CO., an attractive J. F. Kernan painting entitled "Fals," colorfully executed with a blonde girl and a silky haired dog as the subject matter. The 1941 monthly calendar pad designates the quarters of the moon, and all holidays.

SANTA FE railroad uses a lithograph of the "Navajo Shepherdess" to decorate its 1941 monthly three-on-one calendar. It is a colorful reproduction of a painting by Gerard Curtis Delano, a contemporary western artist noted for faithful presentations of the life of the American Indian.

H. J. STERRENBERG GRAIN CO., extends "Season's Greetings" with one of those handy household calendars on which farmers may make notations about events during the year. The notations are made on dated spaces under a cover sheet that shows a picture of the company's office and country elevator, and promises "Top Prices for Your Grain."

GRAIN INSURANCE & GUARANTEE CO., Winnipeg, Man., has a war motif in its 1941 monthly calendar. Light blue, and black ink is used to reproduce the picture of an imposing destroyer, under which is the legend, "Guarding the Grain Routes." On each of the 12 monthly sheets, in addition to the monthly calendar, is a helpful suggestion for protecting the grain elevator from fire.

Seed Corn Grading

By A. H. WRIGHT, Wisconsin College of Agriculture, before American Society of Agricultural Engineers

Seed corn grading is a very difficult problem, and I am sure that none of us is satisfied with present accomplishments. But significant progress has been made.

WHY IS GRADING A PROBLEM?—The introduction and extensive use of hybrid varieties has created the seed corn grading problem. Not only are there innumerable more varieties, but the variations in the seed size and shape of the hybrids are incomparably greater than those of open pollinated varieties. A composite of the seed of the varieties used in Wisconsin alone has a variation of 24/64" in length; of 24/64" width; and of 24/64" in thickness (this, of course, includes all seed—the flats, thicks and rounds). Also, the seeds possess ridges and depressions—they are "lop-sided," angular and wedge shaped. Another thing, the need for accurate planting is greater in corn than for any other important crop—a few pounds must plant an entire acre in either hills or drills—and the stand must be uniform—and now added to all this is "eye-appeal," created by high-pressure sales propaganda.

DEMANDS THAT MUST BE CONSIDERED.—Anyone who tackles the seed corn grading problems must, I believe, consider (1) the needs of farmers who plant the seed—the degree to which accuracy of planting is useful to farmers; (2) the planting equipment—planters and planter plates now in farmers' hands or now available to them; (3) the grading equipment that is now available to seed corn producers; (4) the appearance ("eye-appeal") of the seed.

In attempting to work out a set of "standard grades" for Wisconsin, we have tried to serve the immediate needs—meaning that we must have grades that can be planted with the present planting equipment—with planter plates now in use—also that we must have grades that can be made on the grading equipment that is now available. We have not attempted to set up "ideal" grades on the assumption that the necessary planting and grading equipment would be immediately forthcoming. We believe, however, that in consideration of future progress, methods of attack other than we have used should be considered.

SIMPLIFICATION OF GRADES IS DIFFICULT.—It is our opinion that for the present at least, grading cannot be simplified; that to handle the varieties of any one state a rather large number of grades is necessary. In setting up a set of standard grades for any one state or region, all of the varieties used in the area must be included—thus in Wisconsin we must consider the very short, relatively broad seeded varieties used in the north and the very long, narrow seeded varieties used in the southern counties—and also the varieties having seeds of intermediate size and shape.

In addition to variations that obtain in the size and shape of the various varieties, it is also necessary to consider the variations that obtain in available planter plate equipment. If there were but one style of planter and it combined every good feature of all planters—and if a complete range of planter plates were available for such a style of planter—then much simplification of grades could be accomplished—but it would still be necessary to have a considerable number of grades.

There is another way to reduce the number of grades—simply discard those sizes and shapes of seed that do not conform with the grades that comprise the bulk of the seed produced. If all narrow seeds (those less than 17/64" in width), all short seeds (those less than 20/64" in length), all extra large seeds (those more than 26/64" in width), and

all round seeds regardless of size and shape—if all these were discarded—use for feed instead of seed—then the number of grades would be reduced to less than 40 per cent of those now used. This sounds interesting, but we do not expect it to be done because good crops are obtained from off-sized seeds and the price is relatively low. We are of the opinion that farmer demand will determine what grades, if any, will be discarded. In the meantime, we are obliged to include all sound seed, regardless of size, in our grading plans and standards.

STANDARDIZING GRADES.—Some believe that grades must vary according to the variety of corn and that a set of standard grades is not applicable to a large group of varieties; that if accurate grading is to be accomplished, each variety, or group of similar varieties, must be graded according to its own peculiar (specific) seed makeup. Others contend that satisfactory standards can be set up which will apply to all varieties of any one state and probably to larger corn growing areas. Our experience indicates that standard grades for Wisconsin can be set up and successfully used, regardless of the variation in the varieties that may be involved.

With the help of seed corn producers, we have worked out a complete set of standard grades for Wisconsin. This set provides for all sizes and shapes that are capable of producing a satisfactory crop of corn and all varieties of seed produced in Wisconsin. The set includes 19 grades. The approximate dimensions for each grade have been established—including length, breadth and thickness. Also, planter plate suggestions have been worked out for the nine different makes of planters. In addition, a grading scheme or "seed flow" for making the grades has been provided and a detailed description of each grade has been prepared.

THE PLANNING OF GRADES.—Since seed corn has length, breadth and thickness, and since each of these dimensions is related to planting accuracy and to planter plate design, it is necessary to plan the separation of seed according to all three dimensions. Length grading is new, but fully as important as width and thickness grading. Equipment for handling each dimension is now available.

Our grading scheme provides for three lengths of seeds. This does not mean that the seed of any one variety should be separated into three lengths, but that if a composite were made of the seed of all Wisconsin varieties, then this composite would require separation into three lengths. Each separate variety requires separation into two lengths only. Thus a deep (long) seeded variety will be separated into long and medium length seeds; a variety having seeds of medium depth (length) is separated into

medium length seeds and shorts; a variety having shallow (short) seeds is divided into shorts and discards. In this way we obtain long seeds, medium length seeds and short seeds.

A fixed or sharp boundary line between length separations cannot be obtained with the equipment that is available, and we do not believe there is any advantage in having a definite or fixed boundary line. Overlapping of one separation into the other is consequently allowable. Each separation, however, has a minimum and maximum limit, with reasonable tolerance allowed.

In width grading we use four dimensions. These may be described as (1) narrow seeds, (2) medium wide seeds, (3) wide seeds, and (4) extra wide seeds. Overlapping of width dimensions and reasonable tolerances are allowed. Seeds of any one variety are usually composed of only three widths and some varieties have only two widths, but a composite of all Wisconsin varieties will involve four widths.

PLANTERS and PLANTER PLATES.—There are three more or less general types of planter box and planter plate arrangements. There is the round hole, hill drop type probably best represented by the Hayes Planter. This type will do a relatively good job of planting poorly graded seed and there is a plate available which will plant, with at least fair accuracy, any of the 19 Wisconsin grades. The number of plates necessary for planting all grades is comparatively small. The accuracy of the number of seeds dropped per hill is not as great as with edge drop plates and there is lack of flexibility. Because of the position of the cells in the plate, they do not change in size as a result of wear. Thus old machines will continue to plant (so far as the plates are concerned) as accurately as new machines.

Another type of planter which we may term the "edge drop—edge selective type" is represented by a large number of makes and probably 90 per cent of the corn in North America is planted with the edge drop—edge selective plate. For many years the overwhelming trend in planter plate design has been towards this type. We assume that the reason for this trend has been caused by the great degree of planting accuracy that such a design provides for planting flat seeds—at least while the planter is new.

Ft. Worth, Tex.—Judge Jas. C. Wilson in the U. S. District Court has declared illegal the plan of a local milling company to pay employees the then minimum rate of 25 cents an hour, plus an amount that would make the total compensation equal to that received by them prior to the effective date of the act, instead of, as contemplated by the Congress, basing overtime pay on the prior wage rate.

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Feeds & Feeding

by

F. B. Morrison

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Grain & Feed Journals

Consolidated

332 S. La Salle St.

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Feedstuffs

Brewers' dried grains production during December totaled 7,200 tons, against 6,600 tons in December, 1939, as reported by the U. S. Dept. of Agriculture.

Distillers' dried grains production in December totaled 17,200 tons, against 14,400 tons in December, 1939, as reported by the U. S. Dept. of Agriculture.

Washington, D. C.—The estimated number of lambs and sheep on feed in the 11 corn belt states this year was 3,447,000 head, an increase of 288,000 head, or about 9 per cent from a year earlier. This is a record number for these states.—U.S.D.A.

The addition of the word "feeding" by the Ass'n of Feed Control Officials to the definition of dried skim milk and dried buttermilk does not require the addition of this word by mixed feed manufacturers who are using milk products in their feed, in their registrations.

Seattle, Wash.—The Pacific Northwest Feed Ass'n will hold its annual convention Feb. 21 and 22 at the New Washington Hotel here, announces Manager J. G. Wilson. The program will include explanation of the wage-hour provisions of the Fair Labor Standards Act as it applies to grain and feed dealers, with Thomas H. Tongue, associate attorney of this division to do the explaining.

Washington, D. C.—Eleven per cent more cattle were on feed for market in the corn belt states on Jan. 1 this year than last. There was also an increase of about 10 per cent in the total number on feed in the 13 western states, including Texas and Oklahoma. A small increase in Pennsylvania is also reported. For the country as a whole the number on feed Jan. 1 this year was probably at least equal to the number on feed in any other year.—U.S.D.A.

Ottawa, Ont.—Canadian millfeed production in November declined from last year. Production of bran fell to 24,910 tons compared to 31,005 tons, shorts 22,138 (31,208) tons, and

middlings 9,459 (10,073) tons, reports the Dominion Bureau of Statistics. During the months of August, September, October and November, 1940, Canadian mills ground (comparative figures for same period in 1939 in parenthesis) 28,882,013 (33,516,848) bus. wheat, 5,127,295 (6,232,613) bus. oats, 962,186 (1,064,602) bus. corn, and 1,044,803 (655,648) bus. barley.

Madison, Wis.—According to a report by W. B. Griem, head of the state agricultural department's feed and fertilizer section, Wisconsin's receipts for commercial feed registration fees reached a new peak of over \$27,900 in 1940, or \$1,400 more than in 1939. Griem reported that 5,212 brands were registered for sale, or 505 more than the preceding year. The total number of feed registrants was 1,018, or 66 more than in 1939. Griem estimated that the total tonnage of feed sold in Wisconsin during 1940 will exceed the 556,000 tons sold in 1939.—H. C. B.

Does Not Believe in Sales

By H. C. B.

Merrill, Wis.—The Lincoln Mill responded to a competitor's advertisement of low feed prices as follows:

"Some of you may have seen the circular on feeds distributed by a dealer in a neighboring town. The prices were claimed to be smashing values. In every instance, except on corn, the so-called sales prices, were about the same as our regular prices, and on some items were even higher than our regular every day prices.

"In regard to corn . . . the 1940 corn crop, as far as quality goes, is about the poorest corn we have seen in 20 years in the feed business. This corn was ripened in the wet, has been snowed and rained on ever since and most of this year's corn is too poor to go into government storage.

"In other words . . . owing to the high moisture of this year's corn, it is not advisable to buy corn ahead. You should use up the corn that you buy, in order to prevent it from going out of condition. We have been trying to buy as dry a grade of corn as we can . . . we can buy wetter corn for less money, but we refuse to do so, for your protection and ours.

"We do not believe in sales . . . your dollar will go just as far here on one day as another, and should you want 100 pounds or 100 bags . . . you can get it here . . . you will never hear us say "we are all out, come back tomorrow or next day."

Suggestive Selling

Suggestive selling is highly recommended by sales experts as a means for gaining new customers for the retail feed store and for the grinding and mixing plant.

"When the farmer comes in to buy something," is the way they put it, "tell him a neighbor (and name the neighbor) of his is having considerable success with feed of this particular formula. Talk about the neighbor's livestock and you will awaken his interest. The farmer may not buy right away, but if the job is done as it should be done, he will think it over and the next time he comes in he'll want to take along a sack.

"Strict honesty in statements, and the use of local references is the key to this kind of selling. The product has to live up to the declarations if it is to build good will and bring in new customers."

Feed Prices

The following table shows the closing bid price each week for March futures of standard bran and gray shorts, cottonseed meal and spot No. 1 fine ground alfalfa meal, in dollars per ton, and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

	Minneapolis Spot		Kansas City	
	Bran	Midds	Bran	Shorts
Nov. 30.....	22.00	21.50	21.00	22.35
Dec. 7.....	22.00	21.50	20.60	22.40
Dec. 14.....	21.00	20.50	20.40	22.20
Dec. 21.....	21.00	20.50	20.55	22.10
Dec. 28.....	20.75	20.50	20.50	22.05
Jan. 4.....	21.25	21.00	20.20	22.25
Jan. 11.....	21.50	21.25	20.65	21.85
Jan. 18.....	21.50	21.50	20.60	22.35
	St. Louis*		Chicago Memphis	
	Bran	Shorts	Soybeans	Soy Meal
Nov. 30.....	24.10	24.65	101½	25.35
Dec. 7.....	23.75	24.00	95½	24.50
Dec. 14.....	23.75	23.90	91	23.25
Dec. 21.....	23.65	24.00	93¼	23.10
Dec. 28.....	23.60	23.45	97¼	25.00
Jan. 4.....	23.85	24.00	100½	25.50
Jan. 11.....	23.75	23.50	102	25.25
Jan. 18.....	23.75	23.90	102	24.50
	Cottonseed Meal		Kansas City	
	Ft. Worth	Memphis	Alfalfa	Corn
Nov. 30.....	36.00	27.35	22.20	65½
Dec. 7.....	36.00	27.35	22.20	62½
Dec. 14.....	36.00	26.50	22.20	61
Dec. 21.....	35.00	26.75	22.20	62
Dec. 28.....	35.00	27.50	22.20	63½
Jan. 4.....	35.00	28.50	22.20	65½
Jan. 11.....	35.00	27.00	22.20	64½
Jan. 18.....	35.00	26.70	22.20	65½

*St. Louis bran basis Chicago delivery; shorts St. Louis delivery.

Northwest Feed Dealers Encourage Research

Reflecting an alertness to the economy of feeding that has brought the feed industry to the front, over 275 delegates packed into the meeting hall for the opening session of the 9th annual convention of the Northwest Retail Feed Ass'n, Inc., held at the Hotel St. Cloud, St. Cloud, Minn., Jan. 13 and 14. Delegates from North and South Dakota joined the Minnesotans and found a full program waiting for them.

President Ledin's Address

PRESIDENT W. L. LEDIN, Bethel, in his opening address, said there is no "bottleneck" in the feed industry to interfere with efficient operation in the national economy in case of war. "In most other industries," President Ledin said, "production is concentrated in a few large centers vulnerable to enemy attack, but even more vulnerable to the inevitable "bottleneck" which results when an item much in demand must come from a limited source.

"While there are large mills in population centers, every city, town and village in the vast agricultural areas of the nation has its own feed mill geared to meet whatever demands may be pressed upon it.

"The farmer of America needs the feed mill for the products which he must have to keep the nation's larder full, and food is as essential to defense as airplanes, battleships and guns."

Sec'y W. D. Flemming Reports

SEC'Y W. D. FLEMMING, Minneapolis, reviewing ass'n activities for the last year, said 1940 was a year of work and united effort but the ass'n "was able to carry its activities to new levels."

In accordance with your instructions this association was incorporated as a non-profit corporation as of May 8, 1940. Liability in the new corporation is specifically limited to \$1.00 per member.

At the close of our fiscal year on Dec. 31, 1940, your association had a gain in membership of 48 retail dealers and 17 associate members or a net gain of 65 new members for the year. The 48 retail members operate a total of 63 stations.

During September regional meetings were held in eight Minnesota towns: Rochester, Worthington, Redwood Falls, Duluth, Little Falls, Willmar, Detroit Lakes and Minneapolis. More than 400 feedmen and members of allied trades attended. These regional meetings cemented ties between the members in the state with the association and gave your officers an opportunity to learn the problems of each section. Secondly, they served to acquaint non-members with the aids and purposes of this organization.

A Feed Dealers Short Course was staged at University Farm on Sept. 23 in cooperation with the University extension division. We were agreeably surprised with an attendance of eighty which exceeded our best expectations.

Officials at University Farm were well pleased with the interest exhibited and have indicated a desire to stage a similar school this year. They suggest that the 1941 Short Course be a two-day affair.

Animal and poultry feed and nutritional problems were the main points of discussion at the 1940 course with some time being devoted to seed.

Something new was instituted by this organization last year in the form of a campaign for better relations between dealers and farmers. This campaign was paid for by the individual dealer and met with a good measure of success. Lloyd Larson explained the program in detail at all of the regional meetings and with your officers and directors called on a great many dealers. This publicity has aroused a good deal of interest and other organizations are planning similar activities.

This association at the present time does not propose to sponsor a gypsy trucker bill in this session of the legislature. Your directorate in a meeting held Dec. 23 came to the conclusion that it would be better to attempt closer enforcement of existing laws than to push new legislation which might not be properly policed. Consequently it was agreed that we ask other interested organizations, including the Minnesota Council of Retail Trades, of which this association is a member, to join with us in getting better and more effective enforcement of existing laws affecting truckers and peddling truckers. One meeting has already been held and another for a more complete discussion of this question is set for Jan. 20.

We propose to go before the railroad and warehouse commission and the secretary of

state and see that existing laws covering motor vehicles are given stricter enforcement.

There is another phase of this activity that definitely falls on the local dealer. I refer to the need for arousing public opinion in your community as to the need for better enforcement of peddling and truck laws. Ray Spatz, Iowa assistant motor vehicle commissioner, recently said:

"We have found with our present itinerant laws in Iowa, that the community receives the kind of law enforcement that the community desires. This is true in regard to speeding laws, parking laws and traffic violations and misdemeanors. It is especially true in the enforcement of itinerant laws."

To make our efforts effective each and every man present must do his share in impressing his law enforcement officers that he wants the present peddling laws enforced. It is likewise up to him to see other business people in his community and enlist their support to the end that the local police may know what the city or townspeople want. If every member will do a good job in this regard our efforts with the State Departments will meet with greater success.

I wish to thank the officers, the directors and the membership for their whole-hearted support and for their many acts of kindness and friendship thru the year.

Resolutions Adopted

THE RESOLUTIONS COM'ITE, consisting of Hubert Brings, St. Paul, chairman; Harold Roth, Cambridge; G. H. Homme, Kerkhoven; Paul H. Gust, Henning, and Leo Fluegel, Rosemont, brought in the following resolutions, which were adopted unanimously:

Seed Law

WHEREAS, Minnesota has one of the finest state seed laws existent in the nation, and

WHEREAS, planting of pure seeds of proper germination and freedom from noxious weeds is a matter of vital concern to every farmer, to the grain and milling industry, to the feed trade and to the public generally, be it

RESOLVED, that this association go on record as urging that the present seed law be strictly enforced in order that the full benefits of this act be made available to farmers in particular and the citizens of Minnesota generally.

Grinding Charges

WHEREAS, a wide variation in the prices charged for grinding feed exists in this state and it is apparent that some operators of feed milling equipment are operating on a schedule of prices which are below cost, be it

RESOLVED, that this association appoint a com'ite to carefully investigate the grinding situation as it applies to Minnesota and make definite suggestions as to how these conditions may be corrected or improved.

Program Com'ite

THIS COM'ITE is of the opinion that this association should have a program planned for the coming year, therefore it recommends that the president appoint a com'ite from the direc-

torate at its first meeting following this convention to prepare a program for 1941.

Seed Buying

WHEREAS, direct buying of seed in small lots from farmers by the wholesale seed trade constitutes a nuisance to the retail dealer and in a considerable degree disrupts the local market, and

WHEREAS, consignment stocks of seeds have been set up at various points which we feel is an unnecessary increase in competition to the local dealer,

WE RECOMMEND that a com'ite be appointed to confer with the wholesale seed trade to the end that these matters may be corrected.

Truck Law

WHEREAS, many laws exist on the statute books which would adequately protect the small town merchant from the unfair competition caused by gypsy truckers and unlicensed peddlers, be it

RESOLVED, that this association strongly urges the proper officials of the State of Minnesota to see that our present laws affecting truckers and peddlers be properly enforced.

Salt Prices

YOUR com'ite recommends that the president appoint a com'ite which is to have as its duty the investigation of the wide variation of prices and practices which exist in the salt industry and to discover if possible why these variations exist.

Publicity

WHEREAS, this association has conducted a publicity campaign for the past several months and apparently this program is bringing about the desired results, your com'ite recommends that this work be continued.

Feed Research

WHEREAS, business and industry in Minnesota are based mainly on our state's agricultural resources and that, directly or indirectly, the prosperity of the farmer controls the welfare of our people, and this well-being of our producer fellow citizens is aided by research and experimental work, and

WHEREAS, large sums of money are spent each year on the maintenance of our State University and on the College of Agriculture at University Farm, with but seemingly small sums made available for experimental work, therefore, be it

RESOLVED, that we urge the members of the appropriations com'ites of our state legislature to give serious consideration to this phase of the University's work and to make available increased funds to the end that we may hold our experimental workers and bring Minnesota to the place it should rightfully enjoy in the field of agricultural research.

Officers Elected

THE NOMINATING COM'ite, consisting of John Heyerholm and Theo. Tschann of Northfield and Oliver Ellingson, Spring Grove, suggested re-election of old officers, and the delegates unanimously voted them in. These officers are: W. L. Ledin, Bethel, president; L. J. Weidt, vice president, and W. D. Flemming, sec'y-treasurer, both of Minneapolis.

G. H. Homme, Kerkhoven, replaced M. A.

Nominating Committee



Theo. Tschann
Northfield

Oliver Ellingson
Spring Grove

John Heyerholm
Northfield

DeWerd, Olivia, and Clair St. John, Worthington, replaced Paul Klaverkamp, Mankato, on the directorate. Hold-over directors are: Ray T. Wirt, Lewiston; A. O. Olson, Dodge Center; Joseph Donovan, Albert Lea; R. M. Serkland, St. James; Paul H. Gust, Henning; E. J. Houle, Forest Lake; Rudolph Emerson, Wanamingo; L. H. Patton, Glencoe, and John Heyerholm, Northfield.

Speakers

DEPUTY COLLECTOR ARTHUR GRANUM, of the U. S. Internal Revenue Service, explained "Changes in the Federal Income Tax Law" and answered numerous questions from the floor.

Poultry Feed Suggestions

DR. H. J. SLOAN, of University Farm's extension service, St. Paul, leading a poultry nutrition clinic, centered his talk around "free choice" feeding of poultry. This system places before the birds, both a high protein concentrate mash, balanced except for grains, and grains in separate hoppers.

While the 10 months of feeding in current tests at University Farm are neither complete nor conclusive, Dr. Sloan advised that individual hens vary widely in their requirements, and consequently do better on a "free choice" diet than on a fixed balance such as they must consume when fed mash alone.

The most efficient protein level in a concentrate has not been established at University Farm, said the speaker, but satisfactory results have followed levels ranging from 20% to 38%. He warned that the most profitable level may vary under different conditions and that the profit goal takes precedence over maximum production.

University estimates that a diet of half corn and oats as grains and half a 21% protein concentrate would be a balance selected by the hens; that a 26% protein concentrate would lead the birds to consume 3 parts of grain to one of mash, and that a 32% concentrate would lead the hens to consume $3\frac{1}{2}$ times as much grain as mash, were approximately correct in tests. Total feed consumption remained about the same whether the protein level in the concentrate was high or low.

Dr. Sloan's figures showed a moderate advantage in using a 21% concentrate, with the 26% concentrate close behind. The 32% level led to a drop in egg production for which Dr. Sloan said he could not account.

Good Dairy Feeding Pays

J. B. FITCH, dairy extension man from University Farm, led a nutritional round table on dairy feeding, emphasizing breeding and culling as a means of building up high producing herds, and feeding to maintain production from these animals.

Neither low feed prices, nor high butterfat prices are essential to making a profit from dairy cattle, said the speaker. Profit, he said, depends upon keeping the cost of production under the cost of the feed. This requires good cows and good feeding.

Using figures compiled by the Minnesota Cow Testing Ass'n in 1938, when butterfat was worth 30c per lb., Mr. Fitch showed that cows producing at the 190 lb. per annum butterfat level consumed \$35 worth of feed, produced \$22 of income over feed cost, ate up 18.4c worth of feed for each pound of butterfat produced. Cows producing at the 500 lb. per annum level, ate \$64 worth of feed, but produced \$86 in income over feed cost, and dropped the cost of feed for each pound of butterfat produced to 12.8c. Variations in production of butterfat between these high and low levels showed similar variations in the cost of production and the returns from feeding.

Advertising Principles for Retailers

LLOYD S. LARSON, Mankato, who has been working closely with the ass'n to develop better relations between retail feed men and their farmer customers, outlined re-

tail advertising principles in leading a clinic on this subject.

Advertising copy must attract attention by illustrations, headlines or layout, he said. It must be concise, but it must give sound reasons for purchasing the product offered, and it must be published in media that reaches the customers sought. He included in advertising mediums such things as merchandise displays and feeding demonstrations.

L. E. TIBIAS, Pipestone, expressed himself as quite pleased with his returns from monthly mimeographing of a four-page mailing piece that includes information as well as his offers of feeds and associated lines of merchandise.

L. J. WEIDT, Minneapolis, whose experience covers 23 retail stores operated by his company, said experimentation has disclosed that different methods of advertising bring different returns in different localities. Local conditions must be studied in developing an advertising policy which will bring maximum results.

A Retail Feed Sales Policy

BEN REIKE, Mankato, speaking on "If I Were a Retail Feed Dealer," said he would choose carefully a single line of feeds which he knew would meet the requirements of his trade area, and he would put all his efforts behind this single line.

Mr. Reike said he would plan thoroly a definite merchandising and sales policy which he would gear to his business to make it work smoothly; he would study farm conditions and feeding problems so as to associate his business with these and render a complete service; he would maintain a friendly atmosphere and take an interest in civic projects, and the family and social affairs of his community. Mr. Reike proposed maintaining a definite advertising plan utilizing those types which experiment demonstrates most effective, and keeping it up to reap the returns from repetition. He would follow a careful credit policy in the conviction that credit customers are friends only so long as they are extended credit.

Fish Meal Good for Pigs

White fish meal is an excellent protein supplement for pigs on good pasture when they are fed a ration consisting of shelled yellow corn, and a mixture of equal parts by weight of white fish meal and linseed meal, accord-

ing to John P. Willman of Cornell University, before the Cornell Nutrition School.

Pigs receiving these rations in four trials made an average daily gain of 1.42 lbs. consuming 332 lbs. of feed for each 100 lbs. of gain.

When menhaden fish meal replaced the white fish meal in the ration, the rate of gain dropped to 1.34 lbs. per day, and the feed required for 100 lbs. of gain increased to 336 lbs. The mixture of menhaden fish meal and linseed meal, and menhaden meal alone, produced approximately equal results.

A ration in which digester tankage replaced the fish meal in combination with linseed meal led to gains of 1.23 lbs. daily, and increased the feed requirements for 100 lbs. of gain to 357 lbs.

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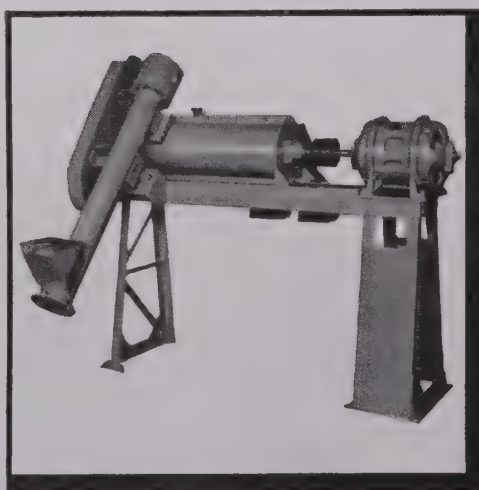
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Texas Feed Sales Show Another Increase

The 35th annual report on inspection of feedstuffs sold in Texas, records analysis of 3,592 samples, of which 3,496 were taken by inspectors, during the fiscal year ending Aug. 31, 1940. Additional work by the Texas Division of Chemistry involved assaying 28 samples of fish liver oils and fortified fish liver oils for Vitamin A and D potency, assaying 30 samples of feed for carotene content, examination of 27 samples of cottonseed cake for hardness, and making 385 determinations of salt and 363 determinations of carbonate of lime in mixed feeds.

The report estimates that 1,705,552 tons of feeding stuffs were sold in Texas during the fiscal year, which shows continuation of the increase that has been growing for the last decade. During the fiscal year ending in August, 1939, the estimated sales were 1,697,189 tons; in 1938, 1,542,833.

Carotene in feeds is looked upon by the report as needed in feeds for poultry and hogs that do not have access to green feeds. It is a source of Vitamin A, which dairy cattle, sheep and beef cattle secure from green plants and roughages, but which is often denied hogs and chickens.

Careful analysis of 28 samples of feed submitted by feeders followed claims of the latter that they had suffered loss of livestock, and suspected the feed was responsible. These samples included 13 of poultry feed, and 15 of stock feed. In no instance did the closely supervised tests show the presence of any poison or other substance which might cause the sickness or death of animals.

Ohio Regulations Define Alfalfa Products

Regulations adopted by the Department of Agriculture of the State of Ohio cover alfalfa products registered and sold in that state. Attention is directed particularly to the last item stating that alfalfa meals must be labeled to indicate the year grown.

The term "dehydrated," as applied to alfalfa products, must not be used unless the product has been artificially dried, immediately after it comes from the field. This pertains to freshly mown alfalfa and does not mean hay that has been damaged in the field by abnormal weather conditions or undue neglect.

"Alfalfa Leaf Meal" shall mean that portion of alfalfa hay consisting chiefly of leafy materials separated from alfalfa hay or meal, and shall not be adulterated with any foreign material or include a mixture of any other hay. "Alfalfa Leaf Meal" must not contain more than 18% of fiber, and not less than 20% of protein.

"Alfalfa Meal" shall mean ground alfalfa hay after having been dried by artificial methods or otherwise, and shall not be adulterated with any foreign material or include a mixture of any other hay. It must not contain more than 33% fiber, and not less than 13% protein.

Any blend of "Dehydrated Alfalfa Leaf Meal" and "Dehydrated Alfalfa Meal" must be labeled as "Dehydrated Alfalfa Meal," with maximum fiber not to exceed 28%, and not less than 17% of protein, and shall not be adulterated with any foreign material or include a mixture of any other hay.

"Alfalfa Stem Meal," shall mean that portion of alfalfa hay remaining after the separation of leafy material from alfalfa hay or meal, and shall not be adulterated with any foreign material or include a mixture of any other hay. "Alfalfa Stem Meal" shall be labeled to show the maximum per cent of fiber and the minimum per cent of protein.

"Sun Cured Alfalfa Meal" shall mean ground alfalfa hay which has been dried by other than artificial methods and shall not be adulterated with any foreign material or include a mixture of any other hay.

Any blend of "Dehydrated Alfalfa Leaf Meal," "Dehydrated Alfalfa Meal," or "Dehydrated Alfalfa Stem Meal" with "Sun Cured Alfalfa Meal" must be labeled as "Mixing Alfalfa Meal," and shall not be adulterated with any foreign material or include a mixture of any other hay. "Mixing Alfalfa Meal" shall not contain more than 33% fiber, nor less than 13% of protein.

All alfalfa meals must be labeled to indicate the year grown.

Carotene Affects Milk Yield of Jersey Cows

By O. C. COPELAND, Texas Agricultural Experiment Station

The effect on milk yield of an inadequate supply of carotene, or vitamin A, in the ration of recently fresh and high producing Jersey cows was the subject of experiments conducted at the Texas agricultural experiment station.

The amount of carotene supplied to one group of cows was 1,500 micrograms of crude carotene per 100 lbs. liveweight daily, a quantity comparable to that supplied the average dairy cow in the Southwest during periods of drouth or during periods of feeding without pasturage. The other group was fed a daily allowance of 15,000 micrograms of carotene per 100 lbs. liveweight, or an amount more nearly adequate to supply the carotene requirements for milk production than is commonly furnished dairy herds of this section during periods of drouth, or without green pasturage.

The results of two experiments using 12 cows in each experiment indicate that the milk yield of high producing dairy cows can be reduced thru an inadequate supply of carotene, or vitamin A, over relatively short periods of time, especially during that stage of the lactation period when milk production is at the peak. Cows on the higher level of carotene feeding produced approximately 10% more milk than the cows fed on the lower level of carotene.

Iodine Content and Requirements

Iodine in minute quantities has long been recognized as necessary for the health of man and animals. Where very low quantities of iodine in foods, feeds, and waters occur, there may be a high incidence of simple goiter. Other disturbances of health may also be due in part to insufficient iodine intake.

The quantity of iodine required daily is very small, 1 microgram of iodine per pound of animal or man being considered sufficient (48), (one microgram is about two one-billionths part of a pound).

The daily iodine requirement for farm animals has been estimated by Levine, Remington, and von Kolnitz (35) to be from 20 to 40 micrograms per 1000 Calories of the ration. Using this estimate as a basis, Mitchell and McClure (55) estimate that the daily iodine requirement of a chicken is from 4.5 to 9 micrograms, of a sheep from 50 to 100 micrograms, of a pig from 80 to 160 micrograms, and of a cow giving 40 pounds of milk from 400 to 800 micrograms. Orr and Leitch (61) estimate that in non-goitrous regions the daily iodine intake of a fowl is 5 micrograms, of a sheep from 120 to 2,000, of a pig from 40 to 80, of a sow, about 200, and of a cow, from 3,000 to 30,000 micrograms; evidently there may be considerable excess iodine at the higher levels, but the lower figures given by Orr and Leitch are in fair agreement with the estimates of Mitchell and McClure.

Iodine in 235 samples of cottonseed meal ranged from 23 to 1420 parts per billion. The average iodine in samples from different geographic divisions ranged from 92 parts per billion in the West Cross Timbers to 251 parts per billion in the Rio Grande Plain. There was good agreement between the average iodine in cottonseed meal and that in soils of the same region.

Iodine in 6 samples of coarse roughage (fodders, silage, and stover) ranged from 53 to 115 parts per billion, with an average of 74 parts per billion. One sample of sumac silage, however, contained 835 parts per billion of iodine. Iodine in 5 samples of hay varied from 90 to 550 parts per billion, with an average of 271 parts per billion. Iodine in 6 samples of grass varied from 92 to 1086 parts per billion with

an average of 492 parts per billion. A sample of chapparero prieto (*Condalia obtusiflora*) contained only 21 parts per billion, while a sample of prickly pear (*Opuntia* sp.) tips contained 1125 parts per billion. There was thus a considerable range in the iodine content of different samples of the same type of forage and a large range in the average iodine content of different types of forage.

The average iodine content of young bluestem was appreciably higher than that of young Bermuda and about four times as high as that of mature bluestem.—Bulletin 595, Tex. Agr. Exp. Sta.

New Feed Trade Marks

POLAR is trade mark No. 435,618, filed by International Salt Co., Inc., Scranton, Pa., for rock salt.

MASHTRATE is trade mark No. 436,816, filed by Moorman Manufacturing Co., Quincy, Ill., for poultry feeds.

CLUB DINNER is trade mark No. 437,362, filed by the Great Atlantic & Pacific Tea Co., New York, N. Y., for dog food.

SWANKY, in outline lettering, is trade mark No. 436,699, filed by Ready Foods Co., Inc., Chicago, Ill., for canned dog food.

WUICHET'S WAMOR MINERAL is trade mark No. 435,187, filed by Wuichet Products, Inc., Dayton, O., for mineral cattle feed.

MARVEL is trade mark No. 436,440, filed by Ready Foods Co., Inc., doing business as American Beef Co., Chicago, Ill., for canned dog food.

PROTEK worked thru the middle of an outline letter S is trade mark No. 433,449, filed by the Harold N. Simpson Co., Chicago, Ill., for livestock foods.

DEPENDON worked thru the middle of an outline letter S is trade mark No. 433,450, filed by the Harold N. Simpson Co., Chicago, Ill., for livestock and poultry feeds.

AGRI-PHOS is trade mark No. 437,637, filed by The American Agricultural Chemical Co., New York, N. Y., for chemical adjuvants for treatment of foods, silage, and other feeds.

CALS-I-DINE, in a fanciful design, incorporating the western hemisphere of the globe, is trade mark No. 436,112, filed by The Burt Co., Seattle, Wash., for dehydrated kelp.

SKIPANON is trade mark No. 422,861, filed by Pacific Marine Products, Astoria, Ore., for fish meal, and meal for poultry and stock food mixtures, as well as other fish products.

A DESIGN contained within a circular band is trade mark No. 422,300, filed by Standard Milling Co., New York, N. Y., for poultry and livestock feeds and other mill products.

VITA-RAY is trade mark No. 437,794, and HEMO-PATIC is trade mark No. 437,793, filed by Leslie W. Wonn, Riverside, Cal., for food for dogs, cats and other carnivorous animals.

VITA-VURV is trade mark No. 435,197, filed by William Cooper & Nephews, Inc., Chicago, Ill., for a conditioning vitamin preparation for use as a dietary supplement in feeding dogs.

HAYNES' STATE PILOT are the words worked into a design on and over the letter H to constitute trade mark No. 432,391, filed by Haynes Milling Co., Inc., Portland, Ind., for poultry, dairy, and hog feeds.

PREMIUM BRAND across the bottom of a blue, red and yellow-orange reproduction of a rosette and ribbons, is trade-mark No. 424,376, filed by the Wertz Seed Co., Sioux City, Ia., for poultry and livestock feeds.

BIG-N-SMALL is trade mark No. 437,760, filed by G. Cuccia & Sons, Inc., New York, N. Y., for canned dog food. The words appear over a picture of a puppy, a small dog, and a big dog.

Poultry Feeds and Feeding

Portland, Ore.—The Oregon Poultry Council held its annual meeting at the Imperial Hotel Jan. 16. Under consideration was revision of federal egg grades, legislation, and government purchases of poultry products. The Council is made up of groups directly and indirectly affiliated with Oregon's poultry industry.

Cottonseed Oil Reduces Hatchability of Eggs

When cottonseed oil at the level of 3.6% of the ration was fed to Single Comb White Leghorn pullets by R. C. Ringrose, C. L. Morgan, and E. J. Lease at the South Carolina Agricultural Experiment Station, hatchability of the eggs dropped from 80% to less than 30%.

Wesson oil and crude soybean oil, fed at the same level, and crude peanut oil at a level of 7%, had no effect on hatchability.

Laying Hens Need Vitamin A

To find the vitamin A requirements of laying hens, H. J. Almquist and E. Mecchi, of the University of California, kept six groups of hens of tested egg producing ability, on experiment for a year (July 9 to July 9).

The basal ration for the various groups was supplemented as follows: 1, check; 2, 3 and 4, carotene in oil to supply 1,800, 3,600 and 7,200 International Units of vitamin A; and 5 and 6, shark liver oil to supply 1,800 and 3,600 I.U. of vitamin A per pound of ration, respectively. Data are reported on the feed consumption, percentage mortality, egg production, hatchability of fertile eggs, vitamin A storage in the livers of hens at the end of the trial and the growth rate and survival of chicks for the six groups.

The lower level of carotene feeding proved inadequate for satisfactory hatchability, while at an equal level of vitamin A units supplied by shark liver oil allowed satisfactory hatchability. Rat assays at the end of the trial indicated that the carotene supplement had lost approximately one-third of its original vitamin A activity. A ration containing the lower level of shark liver oil calculated to contain 2,027 I.U. of vitamin A per pound of feed appeared to represent about the minimum dietary level of vitamin A, which was satisfactory for all purposes.

These results, along with recent findings of other investigators, led to the conclusion that about 2,500 I.U. of vitamin A per pound of feed may be considered as a minimum practical recommendation for poultry feeding.

Similar studies were conducted by Record, Bethke, Wilder and Chamberlin, at the Agricultural Experiment Station, Wooster, O., using eight groups of White Leghorn pullets. Four groups were reared on range and four, in confinement, receiving known amounts of carotene (200, 400, 800 or 1,600 micrograms per 100 grammes of feed) in their ration from date of hatching.

A basal ration of white corn, wheat middlings, wheat bran, ground whole oats, meat scraps, dried skimmed milk, irradiated yeast, and minerals was used, to which dehydrated alfalfa leaf meal was added to supply 200, 400, 800 or 1,600 microgrammes of carotene per 100 grammes of feed.

The results of this trial indicate that a minimum of approximately 400 microgrammes of carotene from alfalfa leaf meal was required per 100 grammes of feed for good egg production and hatchability.

Washington, D. C.—Carloadings of export grain dropped 42.1%, from 54,675 cars in 1939 to 31,630 cars for 1940, reports the Ass'n of American Railroads.

Pelleting Improves Feed for Chickens

An all-mash diet in the pelleted and unpelleted form, respectively, was fed to two similar groups of White Leghorn pullets in two experiments by Rudolph B. Morgan and Burt W. Heywang, at the Glendale, Ariz., station of the U. S. Bureau of Animal Industry.

The all-mash mixture consisted of 53.22% ground yellow milo, 8% alfalfa leaf meal, 15% wheat middlings, 6% meat scraps, 6% fish meal, 6% dried skimmilk, 1.38% ground limestone, 1/2% salt mixture, 2.4% bone meal and 1.5% cod liver oil. The salt mixture used in this formula consisted of 97 parts by weight of common salt, 1 ferrous sulphate, 1.6 manganous sulphate, .0022 potassium iodide, and .0198 cupric sulphate.

Total egg production per pullet in both experiments was higher in the group fed the pelleted all-mash diet, but the difference was not significant statistically.

The group receiving the pelleted all-mash diet had a statistically greater average live weight during both experiments than the group receiving the unpelleted diet.

Mortality in the two groups and hatchability of the fertile eggs incubated from the two groups in each experiment showed no appreciable difference.

Poultry Utilize Proso Millet and Oats

Tests with proso millet and oats in starting, growing, and laying rations for chickens are summarized in South Dakota Station Bulletin 337, by W. O. Wilson and W. E. Poley.

The results of 16 trials (62 lots) with young chicks comparing the various single grains and grain mixtures in starting rations, showed that there were only slight differences in the pounds of feed required per pound of gain when corn, wheat, barley, and oats were compared with millet. Best results were obtained when equal parts of proso millet and any one of the other grains were fed.

Fed singly, millet and oats each proved to be ±93 per cent as efficient as yellow corn. There was no apparent difference in the value of white and red proso millet. Better growth of chicks was evident with 15 per cent each of wheat bran and wheat middlings included in the ration than with 30 per cent of ground wheat.

Amber cane was equally as effective as proso in promoting growth to 8 weeks of age, but resulted in higher mortality than did millet. Used in growing rations, red proso was equal to yellow corn, while oats had about 80 per cent the value of corn. Growing birds consumed proso more readily than cracked yellow corn.

From the results of 5 tests with laying hens (18 lots), it is concluded that red or white proso was approximately equal to either yellow corn or oats for egg production and maintenance of body weight. Use of whole millet instead of ground millet supported good egg production but resulted in a somewhat higher feed requirement per dozen eggs produced. Neither egg production nor hatchability was

improved by increasing the amount of alfalfa leaf meal or meat and bone scraps in the mash mixture.

Laying Birds Need Scratch Grains

An all-mash ration, even tho supplemented with pellets, gave significantly lower egg production, higher feed cost per bird and per dozen eggs, and a materially lower return above feed cost per bird, among both Rhode Island Reds and White Leghorns, than a scratch grain and laying mash ration supplemented with pellets, report C. E. Lee, S. W. Hamilton, C. L. Henry and M. E. Callanan in *International Review of Poultry Science*.

The investigators found that the average eggs per bird over a 10-months period for the combined groups of Rhode Island Reds and White Leghorns fed mash, grain and pellets was 169.69 eggs, compared with 157 eggs for the combined groups of Reds and Leghorns fed an all-mash ration supplemented with pellets.

High Calcium-Phosphorus Level Reduces Use of Manganese

The effectiveness of ingested and injected manganese in preventing perosis in Rhode Island Red chicks, was compared in a 6-weeks experiment by C. D. Caskey and L. C. Norris at Cornell University.

The results showed that a level of 1.5 mg. of manganese per 100 grammes of diet containing 1% calcium and 1/2% phosphorus was just as effective in preventing development of perosis as a level of 14 mg. of manganese per 100 kg. of diet containing 3% calcium, and 1 1/2% phosphorus. As the manganese level in either the low calcium-phosphorus diet or the high calcium-phosphorus diet was increased, the final average weight of the chicks increased and the incidence of perosis decreased.

Injected manganese was much more effective than ingested manganese. The intraperitoneal injection of 10 mg. of manganese per chick during the experimental period of 6 weeks completely prevented development of perosis, even when the chicks received a high calcium-phosphorus diet, whereas oral intake of 141.7 mg. was only partially effective in prevention. Injection of 20 and 60 mg. of manganese also completely prevented perosis, but these large quantities retarded growth considerably.

Concluded the experimenters: calcium and phosphorus, when present in the diet in excess amounts, greatly reduce the availability of manganese in the intestinal tract.

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Vitamin B Fractions

By DR. C. A. ELVEHJEM, University of Wisconsin, before Cornell Nutrition School.

[Continued from page 42, Jan. 8]

The vitamin B₆ requirement of rats appears to be very similar to that for thiamin, namely, 100 gamma per 100 grams ration. The requirement for chicks is somewhat higher. We have used 300 gamma per 100 grams ration and Hogan reported this past summer that approximately 400 gamma per 100 grams ration are required to support a normal growth rate. Three hundred gamma per 100 grams of a synthetic ration is sufficient for the dog. Again the ruminant appears to be able to synthesize pyridoxine and even if we consider grains to be low in this vitamin, they may supply 500 gamma per 100 grams, which is sufficient for all the animals studied.

PANTOTHENIC ACID, the fifth member of the B complex, was first recognized by Williams as a yeast growth factor. It is now known to be of significance in the nutrition of many animals. The symptoms which we now recognize as pantothenic acid deficiency in chicks were first described by Ringrose, Norris, and Heuser in 1931. The following year we obtained a similar deficiency in chicks by feeding a natural grain ration heated at 100° for 144 hours. A little over a year ago it was shown that this deficiency was due to pantothenic acid and that the dry heat was destructive to this vitamin. The chick has been used rather extensively for determining the pantothenic acid content of biological materials although within the past year microbiological methods have been developed.

Liver and yeast are the best sources for this factor while grains are a fair source—(10-15 gamma per gram). Leafy material is relatively low.

The mechanism thru which pantothenic acid functions in the living cell is entirely known, altho there are indications that it is closely related to nerve functions. Rats show very significant growth responses when pantothenic acid is added to synthetic diets low in the B complex but supplemented with thiamin, riboflavin, and pyridoxine. Recent results have shown that adrenal necrosis occurs in rats suffering from pantothenic acid deficiency and complete protection from this condition is obtained when pantothenic acid at levels of 25 gamma or more per day are supplied. High levels of pantothenic acid per day (100 gamma) produce some protection against gray hair in piebald rats on certain rations. The variable results obtained with different levels and different rations give further evidence for the existence of a separate gray hair factor.

We have shown that pantothenic acid is essential for normal growth in dogs, but we have not established the minimum requirement. A clear-cut pantothenic acid deficiency has not been produced in pigs, but I don't think there is any question but that some of the symptoms described by Chick and coworkers and by Wintrobe in pigs kept on synthetic diets were due to lack of this factor. The basal rations were certainly low in this factor, and the filtrate which brought about definite improvement in the paralytic symptoms were undoubtedly rich in pantothenic acid.

It should be pointed out that these deficiencies were produced on highly purified rations and that under practical conditions sufficient pantothenic acid should be supplied by the grain portion of the ration unless the grains have undergone heat treatment. Rations containing large amounts of whole grain would almost meet the high requirement of 1.4 mg. per 100 grams of ration suggested by Jukes for chicks. However, we have found no significant beneficial effect in chicks from the addition of 750 gamma of pantothenic acid to a ration containing essentially corn, casein and cottonseed oil.

CHOLINE.—The sixth member of the B complex should perhaps be choline since it is available in pure form and it has been definitely established that it plays a significant role in the nutrition of several animals. In 1932 Best showed that choline prevented the development of fatty livers in rats on certain diets. McHenry showed in 1935 that choline exerted some effect on the growth of young rats. Griffith and Wade have described a hemorrhagic enlargement and degeneration of the kidneys in rats on low choline diets and Sure has concluded that choline is an indispensable component of the vitamin B complex for growth and lactation of the rat.

Less than a year ago Abbott and DeMasters found that the addition of choline to a purified diet of hens increased egg production, decreased mortality and inhibited abortion of egg yolks. A few months ago Jukes reported that choline prevented the perosis which developed in turkeys on a diet made up largely of corn and skim milk powder and prevented perosis and promoted growth in turkeys on a more highly purified diet. We have recently reported similar results in the case of growing chicks.

For several years we have studied the additional factors needed by chicks present in yeast and liver extract. The acid acetone residue from liver extract was found to have a very significant growth-promoting effect in young chicks on a synthetic diet supplemented with yeast and cartilage. This same effect can be obtained with .1 to .2 mg. of choline hydrochloride per 100 grams ration. Most of the chicks on basal ration show severe perosis, but the chicks receiving choline are completely protected.

Thus choline is certainly a very important nutrient for birds, especially during the early growing period. Further work is necessary to determine if practical rations contain sufficient choline or if natural grains contain other factors which substitute for choline.

In this connection I might describe some of our other work with chicks. Most of our studies have been based on the fact that normal growth is obtained in chicks when a synthetic diet is fortified with cartilage, liver extract, and yeast. If any one of these supplements is omitted, failure results and our problem has therefore been to identify the factors supplied by each of these supplements. After much work on the fractionation of cartilage, the problem was greatly simplified by the report of Almquist and coworkers. We have now found that chondroitin, glycine, and arginine will give a growth response equivalent to cartilage. Our results are therefore in agreement with the California workers except that we find it necessary to use 5 per cent instead of 3 per cent of chondroitin. Under practical conditions all these nutrients are undoubtedly supplied in optimum amounts by the grains.

I have already mentioned that normal growth results with cartilage, yeast, and choline. How many additional factors are present in yeast is still a question. We have good evidence that it supplies factor U of Stokstad and Manning and undoubtedly R and S of Cornell workers. We have also good evidence that it supplies still another factor which appears to be biotin.

When crude extracts of yeast were used in place of whole yeast a dermatitis similar to pantothenic acid deficiency resulted. The addition of extra amounts of pantothenic acid had no beneficial effect, but kidney and whole yeast were highly effective. Further work has shown that the factor in these materials is undoubtedly similar to vitamin H or biotin. Thus in addition to the first six crystalline factors discussed, we can add arginine, glycine, chondroitin, biotin, factor U, and factors R and S as essential in the diet of chicks.

Rats do not grow normally on synthetic diets supplemented with thiamin, riboflavin, pyridoxine, pantothenic acid, and choline. A small amount of liver extract will allow optimum

growth. One of the vitamins in the liver extract is undoubtedly the alkali stable factor W and there is some evidence for still other factors. The evidence for these additional factors is more definite in the case of the dog.

In addition to the stable Factor W, the dog requires an alkali labile factor with properties similar to but still distinct from pantothenic acid. Let us hope that in another five years we may know something about the requirements for these factors.

In summary, I think it is obvious that at least some of the better known members of the B complex may be considered from a quantitative point of view. However, we are still in need for improved methods of analysis for

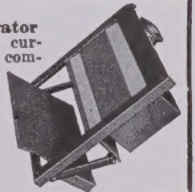
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these factors and more extensive assays on a large variety of our practical feeds.

Evidence is accumulating that most of the B vitamins can be synthesized by the microorganisms in the rumen of cattle and sheep, but we must not rely upon this synthesis too extensively until a wide variety of conditions has been studied. Non-ruminants such as pigs, chickens, and dogs appear to be very susceptible to B vitamin deficiencies and every effort should be made to insure an adequate amount of both the well known and less known factors in the diets of these animals. The proper use of synthetic vitamins under certain conditions should be carefully studied. Studies on the identification of the remaining members of the B complex should be continued as rapidly as possible.

Consequences of Vitamin B Deficiency

Nervous degeneration is common to all species suffering from B₁ avitaminosis, and the manifestations are so striking that the condition in experimental animals is usually termed polyneuritis. The characteristic lesion is degeneration of the myelin sheaths of peripheral nerves; less certain are degenerative changes in ganglion cells of the brain, cerebellum, spinal cord and dorsal root ganglions.

Wolbach could find no difference in the nerve lesions present in pigeons allowed to succumb with polyneuritis and those in which functional recovery had been induced by treatment, and is of the opinion that it seems best to regard all the pathological changes thus far recorded as secondary effects and the primary changes as not demonstrable by present-day histological technique. Engel and Phillips (1938) state that neuropathology was seldom observed in a rat on a vitamin B₁-deficient but otherwise adequate diet.

According to Wolbach (1937), "those pathologic features which may be reproduced in pigeons by means of a diet adequate in all respects except in vitamin B₁, which are common also to human beriberi, are some degree of enlargement of the heart, edema, atrophy of muscles and degenerations of the nervous system."

The engraving herewith presents the characteristic symptom of polyneuritis, which is complete paralysis with the head of the pigeon thrown back.

Another symptom is loss of weight.

This vitamin is known also as thiamin chloride. It is composed of the elements carbon, hydrogen, nitrogen, oxygen, sulphur and chlorine. Nature stores it in the seeds of plants to accelerate the growth of the embryo after germination, and it is found in the outer coat or bran and in the germ of cereal grains. Thus as ordinarily fed there is no danger of a deficiency.

Chicks require 150 micrograms per 100 grams of feed; adult birds 60 micrograms per 100 grams of feed. A microgram is one-millionth of a gram.

The vitamin B content of whole grain is 3 to 4.5 micrograms per gram; of wheat bran, 6; of wheat middlings and rice bran, 15 micrograms.

Protein Requirement of the Growing Chicken

By HARRY W. TITUS, Animal Nutrition Division, Beltsville Research Center, Beltsville, Md., before Cornell Nutrition School

The physiologically optimum level of protein intake is defined as that per cent of protein in the diet that permits an animal to make the largest gain in live weight per unit of feed consumed. If it is assumed that the quality of protein in all diets is the same, and derived from a typical combination of feedstuffs commonly used in feeding chickens, then it can be demonstrated that:

The physiologically optimum level of protein intake for the growing chick is approximately 21 per cent. This level does not decrease as the chicken becomes older.

Whether or not growing chicks should be fed always at the physiologically optimum level in practical poultry production will depend on the cost of protein supplements as compared with the cost of the other ingredients of the diet. In any case, a good practice is to feed a diet that contains 20 to 21 per cent of protein until the chickens are about 12 weeks old, and then gradually decrease the protein content to about 16 or 17 per cent by the time the pullets are ready to lay.

These conclusions are not in agreement with those of many workers who have concluded that the protein requirements decrease as the growing chickens become older. There is a fallacy in this conclusion due to an error in the method of interpreting data. In nearly every case relative rate of gain, or efficiency of feed utilization, has been studied as a function of age rather than of live weight. This method of analysis does not take account of the fact that at 20, 25, or even 40 weeks the chickens on the low-protein diet weighed the least. Nor does it show the additional fact that chickens on the low-protein diet required more feed to attain any given live weight than did chickens on higher protein diets.

Syracuse, N. Y.—The New York State Hay & Grain Dealers Ass'n will hold a luncheon meeting at the Hotel Onondaga on Jan. 23. Guest speaker will be the Hon. Herbert A. Rapp, of the New York state assembly, explaining current laws for regulation of truckers, and proposed legislation to control itinerants.

Riboflavin Essential in Poultry Feeding

Studies on the function and importance of riboflavin in poultry nutrition, conducted by Bell and Kick at the Wooster, O., agricultural experiment station, demonstrate conclusively that this food element is an essential in poultry feeding. Chicks on a ration deficient in riboflavin grow poorly, and a variable percentage develop a characteristic leg disorder. The feeding of 40 microgrammes or more of either a pure crystalline natural or a synthetic riboflavin daily per chick increased growth markedly and prevented occurrence of the leg disorder.

Experiments on hatchability showed that riboflavin was essential in embryonic development. Hens on a ration deficient in flavin produced eggs of which only 4.2% of the fertile ones hatched. The feeding of 100 microgrammes of riboflavin per hen daily increased the hatchability of the fertile eggs to 53.3%.

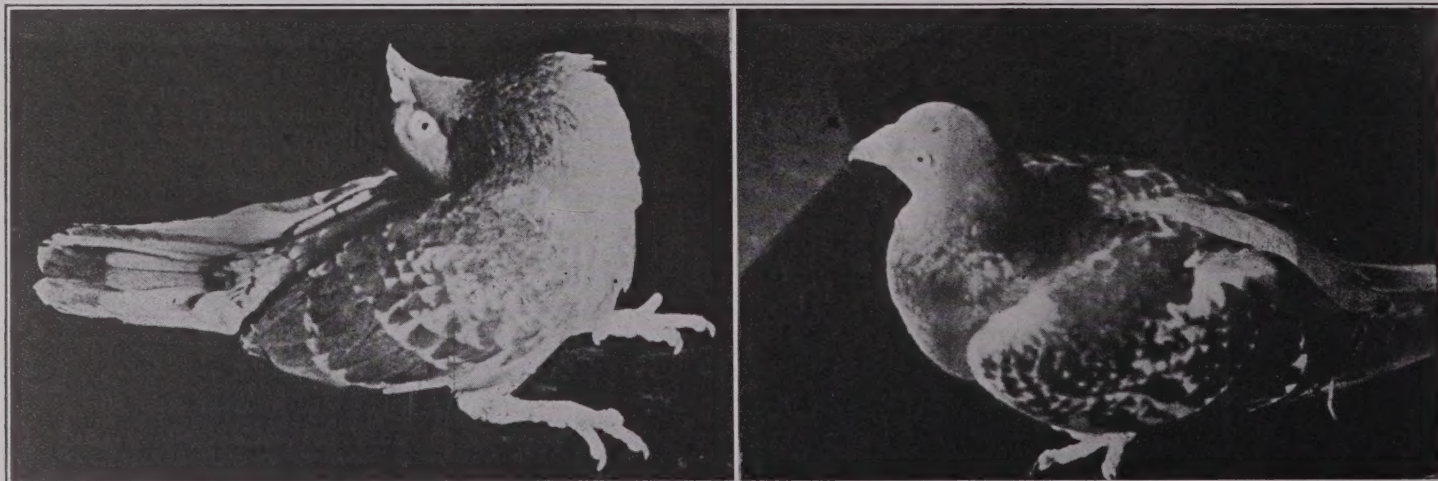
When the flavin intake was increased to 200 microgrammes daily, 80.7% of the fertile eggs hatched. A further significant observation was made that the hatchability of the fertile eggs decreased from 80.7% below 5% in 2 weeks after flavin feeding was discontinued.

Skimmed Milk in Poultry Rations

The content of dried skimmed milk in eight all-mash rations was varied from nothing to 8.75%, by 1.25% increments, in a series of three experiments with groups of White Leghorn chickens from one-day to 72 weeks of age, reported by W. H. Ott, H. C. Kandel, and R. V. Boucher, in Bulletin 381 of the Pennsylvania Experiment Station. All groups were given 16.9% protein starting rations to 12 weeks of age and 14.4% protein rations thereafter.

The rate of growth during the first 2 weeks was directly related to the level of dried skimmed milk in the ration, and total feed consumption and total gain in body weight to 24 weeks increased with increasing levels of milk in the ration, altho all groups grew at approximately equal rates from 10 to 24 weeks. The most efficient gains in bodyweight on the basis of dried skimmed milk intake were made by the chicks receiving the 1.25% and 2.5% levels.

Age at sexual maturity decreased with increasing amounts of milk, while bodyweight at sexual maturity and percentage hatchability of fertile eggs increased with increasing milk levels. From the standpoint of egg production, egg weight, and hatchability the most efficient performance by laying pullets occurred at the 2.5% and 5% levels. Results at the 2.5% and 3.75% levels were essentially as satisfactory as the higher levels.



Polyneuritic Pigeon. At Left Condition before, and at Right, after Treatment.

Photo by Merck & Co.

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Grain Shipping Ledger for keeping a complete record of 4,000 carloads. Facing pages are given to each firm to whom you ship and account is indexed. Book contains 80 double pages of ledger paper with 16-page index, size $10\frac{1}{2} \times 15\frac{1}{2}$ inches, well bound with black cloth covers and keratol back and corners. Weight, 4 lbs. Order Form 24. Price, \$3.50, plus postage.

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Wagon Loads Received has columns headed: "Month, Day, Name, Kind, Gross and Tare, Net Pounds, Bushels, Pounds, Price, Dollars and Cents, Remarks." Contains 200 pages of ledger paper size $9\frac{1}{2} \times 12$ inches, providing spaces for 4,000 loads. Bound in heavy boards with strong cloth covers and keratol corners and back. Weight, 2 lbs. Order Form 380. Price \$2.50, plus postage.

Receiving and Stock Book is arranged to keep each kind of grain in separate column so each day's receipts may be easily totaled. It contains 200 pages linen ledger paper size $9\frac{1}{2} \times 12$ inches, ruled for records of 4,000 loads. Well bound in black cloth and keratol back and corners. Shipping weight, $2\frac{1}{4}$ lbs. Order Form 321. Price \$2.50, plus postage.

Grain Receiving Ledger has 200 pages linen ledger paper and 28-page index, $8\frac{1}{2} \times 13\frac{1}{2}$ inches, numbered and ruled for 44 entries. Well bound in pebble cloth with keratol back and corners. Weight, 3 lbs. Order Form 43. Price, \$3.00, plus postage.

Form 43 XX contains 428 pages. Shipping weight $4\frac{1}{4}$ lbs. Price \$5.00, plus postage.

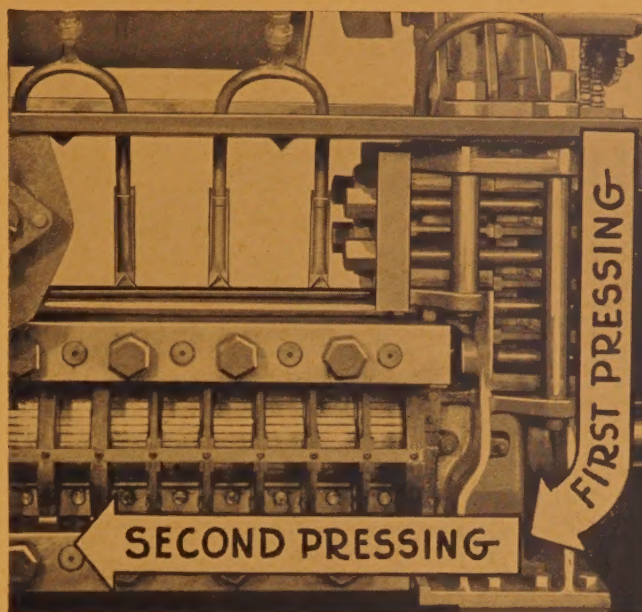
Grain Scale Book is designed to assign separate pages to each farmer and their names can be indexed so their accounts can be quickly located. It contains 252 numbered pages and 28-page index, of high grade linen ledger paper $10\frac{1}{2} \times 15\frac{1}{2}$ inches. Each page will accommodate 41 wagonloads. Well bound with heavy board covers with cloth sides and keratol back and corners. Weight, $4\frac{1}{4}$ lbs. Order Form 23. Price, \$4.00, plus postage.

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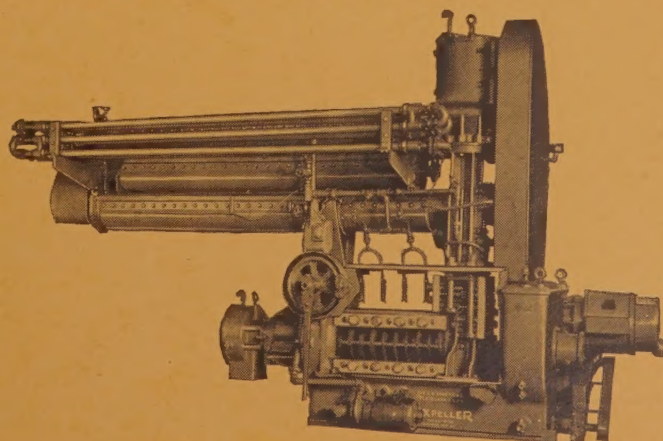


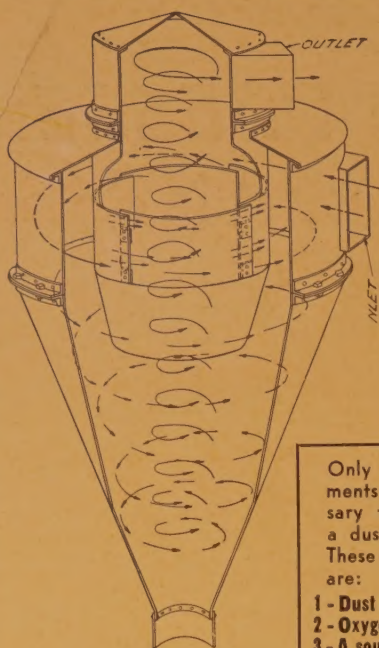
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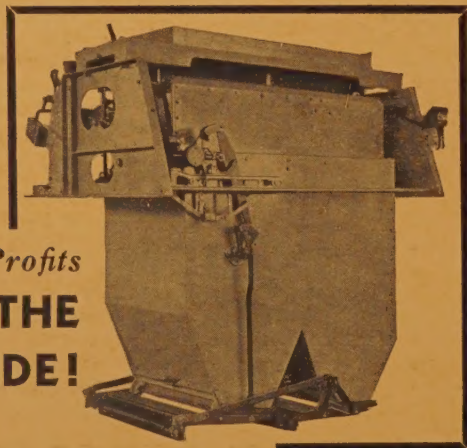
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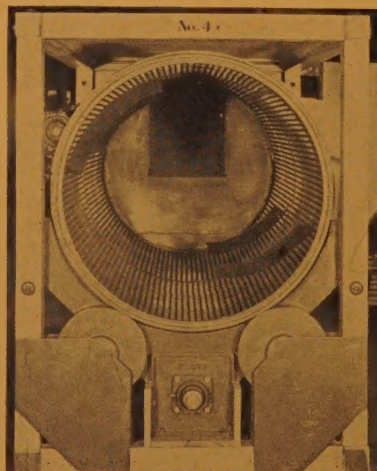
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